Transoniq Hacker

The Independent News Magazine for Ensoniq Users

Remembrance of Geezers Past

Tom Shear

Product: Pro-Rec's *Analogue Collection* Sampling CD,
Price: $79.
Contact: Pro-Rec, 106 W 13th Street, Suite 13, NY, NY 10011. Phone: (212) 627-3148.
For: EPSs, ASRs, TSs.

This product took me a long time to review. It's not that I had a difficult time deciding what I thought about it — as a matter of fact, I had made my mind up the first time I listened to it. The problem was, it seems the manufacturers wanted their CD back when I was finished reviewing it. So, for an entire week I spent the time from when I returned from work until midnight sampling the sounds off this CD for my own greedy, evil purposes. That is to say, there's a lot of great material here, much more than on most sampling CDs I've listened to.

You should understand where I'm coming from before you read further. I am of the opinion that an old analog synth will blow the microchips off most modern synths. There's something about the imperfection and shagginess of these venerable beasts that really appeals to me. So suffice it to say that if your preference is for more modern Wavestation-type sounds, this CD will not be your cup of java. I've also spent a lot of time with the original keyboards themselves for my own sampling endeavors, so when I say these are good sounds, it comes from someone who is very picky about quality.

If I'm not mistaken, this is the same CD that was originally for sale over the Internet under the name, *"Grahame Digital."* The instruments represented on this particular CD are the ARP Odyssey, Chroma Polaris, Elka Syntex, EML 101, Kawai K3, Korg MS-20, Moog Memorymoog, Moog Minimoog, Oberheim Matrix 12, Oberheim OB-1, Oberheim SEM, Oberheim Xpander, Roland Juno 106, Roland Jupiter 8, Roland MC202, Roland SH-7, Roland TB-303, Sequential Circuits Prophet 5, Sequential Circuits Prophet 600, Sequential Six Trak, Waldorf Microwave, Yamaha CS 5, and Yamaha CS-50. In addition, there is a digital zero reference tone. As you can see, in addition to the more popular classics, there are more than a few very rare instruments represented here.

A good number of these sounds I found to be most useful as basses. Others were quirky sound effects that digital machines choke trying to imitate. In addition there are a number of melodic/poly-

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synth/lead sounds and a few string (too few, in my opinion) entries. In general the recording quality is excellent. There are a few exceptions, but I suspect these may have been imperfections in the original instruments themselves and not the fault of the recording engineer.

All sounds, except most of the sound effects, are given in multiple octaves for multi-sampling enthusiasts. I should note however, that usually a single note transposes quite gracefully. Although there are a few thin, wheezy sounds for those who need them, most of these are very aggressive, powerful timbres that would easily hold their own amidst your band's army of guitar players. So what about the sampling part? Well, it may sound too good to be true but I found it dead easy to loop most of these sounds with outstanding results. Granted I do a lot of this, so it might just be that I'm used to it, but from all of the sampling CDs I've bought or reviewed in the past, these were the most consistently easy to loop. Most of them were also fairly easy to be memory efficient with, except for filter sweeps and other more time-consuming sounds. For me the average block size hovered somewhere in the 200 block range.

Additionally, what I liked about this set is that while it captures the famous character of the instruments, it doesn't rely on the cliche sounds they are known for. For example, the Minimoog section contains only a few basses. The Prophet 5 section doesn't contain a single brass sound. This is one of the things about this CD that made me sit up and pay attention. It offers a lot of what the others haven't bothered with and the sounds were obviously programmed by people who were intimately familiar with their machines.

Highlight sounds include Elka Synthex Blown (a beautiful hybrid of string and flute), Sequential Circuits Prophet 5 Flesh Eater (which now holds the distinguished rank of the best poly synth sound I own), Oberheim Matrix 12 Negative G (a lesson in the infamous Oberheim filter section), and Roland MKS-80 Jonah (one of the fattest square wave basses these ears have ever heard). These are only a few, though. There are plenty of gritty, fuzzy, crunchy sounds that make you wonder why these methods of sound synthesis were ever abandoned (these are probably the people who never had to deal with their synth drifting out of tune during a live performance, however...). Almost all the sounds are winners and beautifully summarize what analog is all about.

My only real significant complaint is that the CD is relatively short. What is here is generally great, but man, I want more! You can squeeze almost 80 minutes of data on a CD, so why not do it? There are 650 samples on this, but there is room for so much more. Why not add some more varied timbres in the remaining space, like some analog bells, more ethereal pad stuff, some percussion, and especially some more strings! Perhaps if we are lucky, Mr. Grahame will grace us with another volume of these geezers of the synth world. Until then, I suggest that all my fellow analogians write a check to Pro-Rec immediately. Your sampler will thank you. ▬

Bio: Tom Shear is the kind of guy you'd like your daughter to marry. (Gullible parents please send pictures and phone numbers of their eligible offspring to: Tom Shear, PO Box...)

Front Panel

RND (♪♪♪)

Ensoniq News

ASR-10 Reads Akai and Roland CDs
By the time you read this Ensoniq will have released OS Version 3 for the ASR-10, which adds the ability to read Akai and Roland CD-ROM sound disks. The importing of these new sound formats covers not only sample names, wavedata, loops and keymaps, but is a nearly complete translation of the programming of Akai and Roland sounds to ASR-10 native mode. This means that sounds will load in virtually ready to play. The OS has "smarts" built into it to allow you to choose key ranges to load in when the nature of the sound program would exceed the 8-layer capability of the ASR-10, so you can decide which part of the sound you want to load into Instrument 1, and then load more of it into the subsequent Instruments until you have imported the complete sound. OS Version 3 is another free upgrade, and only requires a new floppy disk. Ensoniq will be mailing the disks to all authorized dealers, and will be contacting all registered ASR-10 owners shortly.

CDA-3 Sound Library Demo Disk
Ensoniq now has available an audio CD demo of all the AS sound libraries (volumes 1 through 14) which can be picked up at your local Ensoniq dealer, or ordered directly from Ensoniq for only $4 S/H. This demo lets you hear all of the sound demos of these libraries before you buy, so you can evaluate sounds at home, in the car, or even at the beach (although we'd advise waiting until springtime!). Call 800-553-5151 for more information.

SLT Libraries Licensed to Syntaur Productions
Ensoniq has transferred all of the SLT sample libraries (ten volumes of thirteen disks each) to Syntaur Productions for continued selling and support. Syntaur now is the Authorized agent for all Mirage, ESQ-10, SQ-80 and original EPS Ensoniq libraries. Syntaur can be reached at 800-334-1288.

Change of Area Code
When calling Ensoniq please be sure to use the 610 area code, not 215. They have been slowly changing over to this new area code, but effective January 1, 1995 the 215 area code will no longer be in use.

Ensoniq's DrumKat Response —
Last month there was a letter from Daniel Weirich regarding using the ASR-10 with a DrumKat drum controller. At the time he had not had his problems resolved, either by Ensoniq Customer Service

or Kat's. We have been working with Kat to study his problem — they lent us a system to try out ourselves. Since that time we have tried repeatedly to reach Mr. Weirich, but he has been playing on the road. In the interest of all you Hackers here's what we've found about the ASR-10 and the DrumKat in general.

We tested DrumKat 3.5 out of the box with no problems, either playing it into the ASR-10 or recording into the ASR-10 sequencer. We have found that with the THRU of the ASR-10 going back into the DrumKat you can produce the choppy notes and missing notes that Mr. Weirich experienced. If you leave this connection (which you would use to initially "train" the DrumKat which notes you want each pad to transmit, and your choices for velocity ranges) you'll get this scenario. The solution: disconnect the cable going to the MIDI IN of the DrumKat after "training" it. It strikes us that this is likely to be the cause of Mr. Weirich's problem, but we have not been able to confirm that.

We also learned that the DrumKat can be set to transmit notes with extraordinarily long gate times, and to transmit MIDI Note On's but no Note Off's. In either of these cases the ASR-10 will think it is getting a lot of long, sustained tones, and will try to play them at the full length requested (as any good MIDI receiving device should do). It's easy to see how you would run out of polyphony quickly, given the often busy nature of drum parts. Mr. Weirich's Yamaha RM50 did not exhibit these symptoms, since most drum machines can only produce short, non-sustaining sounds. The ability to set this long gate time, and the choice of transmitting Note On's or Note Off's are documented in the DrumKat Owner's Manual — that is where we learned of them.

The people at Kat (Rod in Customer Service and especially Mario DeCuitis) were very helpful and we would like thank them for responding so quickly to our request to help Mr. Weirich (and all you Hackers) out. They assured us that they speak to many ASR-10 (and EPS-16 PLUS) owners who don't have any problems using our products together — in fact they say that Ensoniq is one of the top choices for triggering from the DrumKat.

Hacker News

The *Interface on a Disk* for 1994 is now available. See our ad elsewhere in this issue.

We're still holding off on publishing the Hackerpatch form for the KT's. If you'd like a copy, just give us a call.

Between the elections and the holidays the Post Office (and several readers) tell us that the mails are being delayed more than usual. Hang in there, it's almost over.

Hacker writer and Ensoniq Person, Tony Ferrara, is giving a free concert (sponsored by Temple University) of his original contemporary jazz music — Saturday, Dec. 10th, 8 p.m. at Temple University Center City, 1619 Walnut St., Rm 201., Philadelphia. (215-742-0738).

DiskTracks and the ASR-10

Part I — Selecting a Hard Drive

Anthony Ferrara

Before you actually begin to record any audio tracks directly to a hard disk, you will definitely need to shop around for a drive that is appropriate to the technical needs of this application, as well as your budget. The information provided below will help you to make an educated decision about which model and size hard drive is right for you. For many ASR-10 owners, having a SCSI port installed into their unit and connecting it to a SCSI device like a CD-ROM or a hard drive is the first step into the fabulous (but often confusing) world of "interconnectivity." The thing to keep in mind is that SCSI is not universally compatible in the same way that MIDI is, due to the division of the personal computer world into two main camps: the IBM-compatible PC vs. the Macintosh.

The type of hard drives that would be best for DiskTrack applications would include the Syquest 105 and 270 meg formats, as well as the 150 and 230 meg Bernoulli drives manufactured by Iomega. The most important point to consider when deciding the size and type of drive to purchase is the sheer volume of data that DiskTracks consume, which is 10 meg per minute at 44.1kHz in stereo. The Syquest 44 meg removable cartridge drive will perform adequately with DiskTracks and is quite affordable. However, because of its relatively small capacity, it is not generally considered to be practical for the application in question. The Bernoulli drives are ideal in regard to recording two tracks simultaneously at 44.1kHz, due to their buffering and caching capacity. For a variety of technical reasons relating to its own design limitations, the Syquest 88 meg cartridge drive format is definitely not usable with DiskTracks, nor in general is it at all recommended for use with Ensoniq samplers and TS series synthesizers. All the compatible hard drives mentioned above are available through various computer dealers and mail order catalogues, and are advertised for sale in magazines devoted to the IBM-compatible PC and Macintosh computer platforms.

Cartridge drives are ideal for use with the direct-to-disk technology, since specific disks can be used for a particular project. Disks are also relatively easy to obtain, and are fairly affordable and convenient. Fixed mechanism drives are fine as well, and would include the following types: Fujitsu, Connor, Seagate, Quantum Pro Series. Each may be found for sale under the name of many different vendors, so you will need to ask which type of mechanism is actually inside the particular unit you are purchasing. These drives were former-

ly not recommended for hard disk recording since there was not a convenient way to back them up; however, with the release of the ASR-10 DI-10 (digital I/O interface) and operating system 2.51, it is now possible to back up your ASR-10 formatted drive to digital audio tape. By the way, magneto-optical drives are not appropriate for use with DiskTracks, due to their slow access speed. They are fine for using as a back-up medium and for saving other data such as samples and sequences.

One final suggestion to bear in mind when shopping for an appropriate drive would be the following: please make sure to ask the seller of the drive to allow you a refund or to exchange your unit if the drive is somehow incompatible with your machine. This is important due to the fact that different companies will "package" an approved drive mechanism with or without termination, etc. Due to these variations, hard drive response and results may sometimes be inconsistent. Consequently, it is best to deal with a vendor who is willing to be flexible.

Next time we will talk about the actual direct recording to hard disk. ▬

Bio: Anthony Ferrara is an Ensoniq corporate citizen, and his latest cassette e.p. entitled "Long After Midnight" *has been released and distributed by WATT Products.*

Using a Computer and General MIDI with Your VFX

Joe Travo

Now when I say using a computer I'm not talking about a hardware sequencer that's designed specifically for MIDI. I'm talking about an honest-to-god data-crunching computer, which is *not* specifically designed for the dedicated reproduction of MIDI music, but, with the right software, can be adapted to do a pretty good job of it anyway. There are a few different ways you can do this, all with advantages and disadvantages. You can:

1. Have a sound card installed in you computer when you buy it. Get the software (and drivers) installed at the same time. After that all you need to do is actually learn to use it.

2. Have a MIDI interface installed in your computer when you buy it. This will let you access your MIDI instruments. Also requires installation of the sequencing software. You can probably do this yourself, if you have some time to experiment.

3. Buy a sound module that has a built-in computer interface. Get one with MIDI IN, OUT and THRU, if you can. This also will access the rest of your MIDI gear, but requires the installation of software, driver, ordering of custom cable for the COM Port-to-module connection. Also installation of a new COM Port card to run the Ports simultaneously with different Port addresses and different IRQ Interrupts.

And, some pulling your hair out.

Options #2 and #3 (including the hair-pulling) are the ones that will work best with your VFX or other pre-General MIDI keyboard. I learned all of the above (and more) in the course of a hectic weekend which was made workable, if not simple, by a very capable guy, Jon, at YGI Computers in Fresno.

I started out to make this as simple as possible, so I got the module with the built-in computer-to-MIDI interface expressly to use with my VFX. Plug 'n' Play, I thought.

I was wrong.

I have a MIDI studio, so I know about switching, and SYS-EX, and SYSTEM ERROR 144 messages, and of course stuck notes. I also know how to use computers, sort of, so I figured I could parlay the combination to get my computer (486 33/DX clone with enough memory) to help me with my sequencing.

I was partly right.

A lot of things can go wrong when you start adding software and modifying your computer. This is a good argument for getting your computer configured exactly the way you want it when you buy it, and buying from a store that will support their product and help you use it. Jon's exact words were, "Bring it in. I'll set it all up for you."

And he did. New COM port, Windows driver loaded, everything. Thanks to some knowledgeable guys and an excellent service policy, my TG100 sound module/computer interface is working just the way it's supposed to. We closed everything up and I'm out the door with my expertly-modified, music-ready computer. When I set up everything up at home, boot Windows, get my music software running, turn on my TG100 module, pick a song, hit PLAY, and... it doesn't work. No sound, no MIDI events on the unit's MIDI input LCD.

The software's running though, so I know the demo sequence is playing. If you've done this sort of thing, you may have noticed my basic mistake in the previous paragraph. Unlike most hardware sequencers, a computer running music software has to "know" a number of things, so the order in which you

do things is very, very important. I learned this the hard way. Always turn on your outboard devices (in my case, the TG100 sound module/computer interface) *before* you start Windows. The computer looks for outboard devices and when it sees them, it loads the appropriate drivers. Without these drivers, the MIDI events won't get to your sound modules, so nothing will work.

So *always* turn on your outboard gear *before* you boot Windows (or whatever). You may have to look for some other things too. Sometimes my software disables the command that says "SEND MIDI REALTIME MESSAGES." Unless I enable this, again, no MIDI events get to the sound modules. There are a number of differences between a software sequencer and a hardware sequencer, and the only other tips I can give you are to carefully read the instructions, always get the most recent upgrade (which usually fixes bugs from previous versions), and never assume anything. *And*, re-read the first sentence of this paragraph.

Once the learning curve smoothed out a bit and I had actually composed, recorded and transcribed some songs, I decided that the computer should start doing more of the grunt work. That's where the concept of General MIDI comes in. I had been letting my software send Select Instrument Program Change and Controller commands to my computer interface/sound module, which is General MIDI compatible, but had been manually changing the instruments in the VFX's Multi Setup, and that was way too much like work. I decided that with 60 instruments in RAM and 60 more in my EEPROM cartridge I could set up a pretty respectable GM emulation. Here's how I did it with my VFX — your basic parameters may differ, depending on just what GM module you want to "match," as well as which pre-GM Ensoniq board you use.

First, you'll need Internal Memory (got it) and an EEPROM, since most of the ROM cartridges I've seen don't conform to GM standards for MIDI program numbers. In order to get all the sounds in the right places, you'll also need some kind of external storage device. I used the Alesis DataDisk.

First, I set up my Internal Memory using the best-sounding patches I had. Use your ears. Get the Internal done first, then use the VFX Storage page to send the entire Internal Memory (patches and presets) to the external storage device. Then you're ready to configure your EEPROM. To do this you need to first get all the sounds that will ultimately be on the EEPROM cartridge into the VFX Internal Memory. (That's why you need to save the sounds you just configured to external storage. Besides, it's good to have a backup or two in case of an error.) Using the Cartridge-To-Internal Storage page, I dumped sounds from each of two ROM cartridges into the In-

ternal Memory and individually transferred those that sounded best and corresponded to the GM MIDI program numbers (see below) to my EEPROM. Once that was complete I again used the Storage page (Sysex-To-Internal) to dump my originally-configured Internal patches from the DataDisk to the Internal Memory. Those are the steps — here's the "menu":

I set up my VFX Internal Memory and EEPROM cartridge so that the MIDI program numbers match those on my GM module, with 1-60 in Internal Memory and 61 through 120 in the EEPROM. For example, MIDI program #1 is an Acoustic Grand Piano, #2 is an Electric Grand, #3 is a Rhodes, and so on, through #60. MIDI program #61 is a French Horn, #62 a Brass Section, and on and on. Having the program numbers match up with all instruments on both modules makes it a snap to have the computer select the correct instruments via Program Change commands, and the various Controller commands make it possible to change Volume, Modwheel, Patch Selects, etc. While I have the song playing, I "audition" the respective sounds and decide which I'll use, then I disable the MIDI channels of those that I won't. You can also individually replace patches with others from the ROM, or other cartridges on as-needed basis, but be sure you can get back the sounds you want most before you make any changes.

You'll need to be sure that the appropriate MIDI Control commands are enabled so that your computer can control things like patch changes in the VFX, so a quick review of the MIDI section in the manual may be in order.

This small investment of time has allowed me to reduce my synth setup time by about 85%, and that's time I now spend making music, or at least a reasonable facsimile thereof. ▬

Ensequencing

Singing a new song track

Jack Stephen Tolin

In the particular epoch of the age of synthesis in which we currently live, it is commonplace for digital textures to be complex and sophisticated enough to sound like musical (or even non-musical sequences in and of themselves. In this series of articles, of which the present one is the first, I intend to deal exclusively with sequencing strictly using Ensoniq terms, functions, and advantages. Since I am familiar with the latest operating systems for the SQ-1 PLUS 32-voice and EPS-16 PLUS, any information within the pages of this series should be applicable to any of the latest Ensoniq gear.

The first major point on our sequencing agenda is that of the issue of the song track. The song tracks are an Ensoniq innovation which, though in and of themselves are neither good nor evil, can create quite a perplexing problem to the music programmer as to how to use them in the best interests of time, effort, and memory. There are, however, certain laws, rules of thumb, tricks up sleeve, and tips or suggestions that can help quite considerably if we look to them for the proper guidance they have to offer us. Just keep in mind that when all is said and programmed, it is up to you as the music programmer to decide for yourself how best to divide up the responsibilities for the task at hand.

"How many song tracks does it take to screw in a lightbulb?" This is the most obvious qualitative problem: we are free and/or condemned to use only a limited number of tracks. There are eight on an SQ synthesizer, there are twelve on a TS synthesizer, and so on. The only way around this limitation of instruments is simply to make a "song" out of a few consecutive sequences which would comprise the first part or section of the piece of music overall. The same would need to be done for all of the following sections. For example, "Song 00" would be comprised of steps one through five, "Song 01" would be comprised of steps six through eleven, and so on. In this way, you can have eight entirely different instruments in your song tracks from one section to another while even maintaining the same sequences if so desired. The only catch with this approach is that you will need to have a real-time break in the music between sections — maybe an adequate moment for a live instrument or vocal break or drum fill. It is during this live break that you must select the next "song" and be ready to press "play" on count one (or whatever is appropriate). If you decide to use this approach, this might be a good time to consider using the old sequencer foot-switch.

"To be a song track or to be a sequence track — that is the question." So how does one determine what to put on which kind of track? To begin to have a possible answer for this question means to first consider a number of other questions: How complete do you want each sequence as each stands alone; is having the sequences available as stand alone musical pieces more important than the song as such? To what extent do you enjoy repetition in your music; do you enjoy differentiation in your music by placing different sorts of fills, (e.g., drum, bass, organ, guitar, or so on) at the end (or even elsewhere) of individual sequences? To what extent do you enjoy or despise programming song tracks; is it irrelevant whether or not you have to punch in somewhere on count thirteen of repetition two of a particular sequence in the middle of a song to record a superfast two-bar riff, for example? It may be of advantage for you to produce a sequence as stand-alone

and yet another for the song proper. This will, of course, reduce on-board memory, so you must keep everything in perspective. One thing I have found to yield the best effect in song production overall is this: produce sequences ahead of time to lack some primary instruments at or near their end, and place the same instruments on the song tracks in order that you can program different fills every time that particular sequence plays in the song. The most obvious limitation here is that your song tracks will be limited even considerably more than usual as per variety of instrument availability. You win some, you lose some.

"Song tracks of a different color flock together." Whenever possible, it can be a positive — not to mention a creative — move to place entirely new and different instruments into the song preset. I am referring to those sounds in your personal archives that you might have wondered at some point if you would ever even use; I am talking about those bizarre full-stereo percussion sounds and those odd digital-hybrid flute and strings layers — anything! There are various reasons for this idea. It will offer a twist to the piece by allowing you to place different additions every now and then, much in the same way you would place the same instruments at or near the end of a similar sequence as noted above. I even try to do this as often as possible in my sequences, pending track availability. The idea is not so much to submerge a portion or portions of the song or sequences with an individual sound, but it is rather to "hide" new and different sounds in the music, sometimes sparsely. In fact, there is no real need to be loud about it; sometimes a better effect is achieved if some sounds are comparatively quiet. This whole idea has been found to actually enhance my music by adding new color where one would naturally not expect to find it; more meaning is added for the listener since listening becomes more expansive to adjust to the more expansive wash or wall of sound.

"And the song track takes the lead." In addition, new sounds on your song tracks also provide the opportunity to maintain diversity with whatever lead sound you wish to use. (This is assuming, of course, that the "tracks displayed" function in the Control bank is set on "song" for whatever machines are applicable.) In one of my latest songs, I used two sounds not found anywhere else in the sequences to produce a distinctive lead sound — a synth-brass layered with a Rhodes-type emulation. This can often be musically useful, and can even be a constructive area of creative experimentation proving to be fun — another important factor. You will find, that is, if you haven't already, that the preset is an excellent place to experiment with layering sounds. Though you would do best to always keep in mind generally how much polyphony you are using, some of the sonic results you can end up with are truly astounding. And, as Ensoniq would say, layering is as easy as double-clicking a button.

Also keep in mind that there are even many artists who are known for their unique lead synth sounds, such as Herbie Hancock and Steve Winwood. That is to say, there are those who have truly thought of creating lead sounds as an art — and if they really haven't, they sure have made some pretty good finds. I mention this because it could be useful to listen to the leads used by others to give us ideas. Even listening to the contemporary radio stations could be useful. I mention this because I am not usually one to listen to the radio since most of what I do listen to is purchased. I tend to think that the more the number and wider the variety of influences, the better, since more and various influences translates into less limitations.

"Let's build a mountain out of a song track." Of course, one possibility in the area of composition — specifically dealing with instrumentals — is to use your song tracks to facilitate the core melodies over the sequences which provide the familiar background. In one song of mine, *"The Coronation,"* a lower brass section on one song track and a string section on another facilitate major melodies as well as subtle harmonies. Being predominant instruments to the song, they were also found in the sequences. In such cases, they were obviously used differently when playing the song, the same sounds in similar sequences always sounded the same (try saying that three times real fast). Of course, this is the way it should be unless something is wrong with your machine. As a result, the song tends to sound quite organic overall since the song tracks tend to help unify the piece.

"All's well that ends on one beat." As is most fitting, our final point is one of endings. For another of my latest songs, I use a technique that I have mastered by now — well, it's really quite simple. If you want to end a song cold, need a simple way to do it, use little memory, and still have it sound good, then this may just do the trick. Set up a sequence one beat in length (one beat of 1/4), and set the tempo real slow — fifty beats per minute or slower. Record one note of anything at a volume level of "00," preferably anywhere in the sequence other than directly (that is, quantized to the first possible position) on count one. When you edit your song steps, place this sequence at the very end. With your song tracks, record one beat worth of a last beat ending: for example, two octaves of orchestra hit, a bass note (both most assumingly but not necessarily on the tonic), a note from the string section, a final chord with organ, guitar, etc., a noise from the peanut gallery, and so on, all hitting on count one (also assumingly but not necessarily — you could conceivably use any half or quarter note,etc., following). Just remember to mix everything properly so that it doesn't change radically in volume, pan, and whatnot (unless, of course, that is your intention).

This is all for the first installment of Ensequencinq. Keep those sequences on track! ▬

Bio: Jack is currently attending Nazarene Theological Seminary in Kansas City, MO, programs alternative music with a contemporary flavor, and tries his best to take experimental sequencing, synthesis, and sampling to new heights.

Chopsticks in F#

Using the KT Transpose button

Robby Berman

Who among us hasn't wanted to be able to hear *"Chopsticks"* in F#?

Well, okay. Who has?

Oh, alright, bad example, but haven't we all experienced that sinking feeling when our uncooperative digits have finally mastered some tricky fingering, only to find that we'd spent all that practice time in the wrong key for our purposes? Haven't we wished — cover your ears, piano teachers (this means you, Jane) — that we could just press a button and be magically transported into the key of our choice?

I believe so.

It would seem such an easy thing for synths to do: It's all just a matter of math for their little computer brains, no? The truth is that we've always had the ability to transpose our keyboard parts in the Ensoniq synths; we just had to do a little work to accomplish the deed. We could program some pitch offsetting into the sound we were using; or we could go to a preset/sequence track and transpose that. In the KT synths, the job is much more easily done. We've now got a front-panel Transpose button.

It's really pretty simple, as long as you can count to 6 (as a point of reference, that's two numbers more than you need to be able to deal with to qualify as Spinal Tap's drummer). If you're starting out in the key of C, you don't even need to be able to do that much math.

Fingers in C, Ears Somewhere Else

Let's say you've got some hard-won fingering down cold in the key of C, but you want to hear it in Eb. Simply press and hold down the Transpose button on the upper right part of the KT's front panel, and — while still holding the Transpose button down — press the Eb just above Middle C on the keyboard. The little Eb Transpose light will go on. Now when you let go of the Transpose button, everything you play will sound in Eb, even though your fingers are manipulating the keys in C.

When you're starting off with a fingering in C, all you need to do is hold down the Transpose button and press the note on the keyboard that names the key you want to transpose to.

To get back to the real world, just press the Transpose button again — the Eb light goes out and you're back to C.

Transposing From Other Keys

Here's where the counting comes in.

Suppose you want to end up in Eb again, but this time you're actually fingering things in F#. The first thing you need to do is figure out how many semitones away from your original key (F#) you want to go. By counting keys on the keyboard, you can see that Eb is two semitones below F#. That means we want to transpose our F# masterpiece by two downward semitones, or a value of -2.

The numbers above and the key names below the Transpose lights on the KT's front panel constitute a little conversion table. Once you've figured out how many semitones you want to transpose by, you need to locate that number up above the lights. In our example, the -2 value appears two lights to the left of the words "semi" and "note" printed on the KT. Looking below the same light, we see "B." This means that we'll need to press the B on the KT's keyboard to transpose our playing downward by two semitones. Press and hold down the Transpose button — as we did earlier — and press the B just below Middle C. The -2/B light goes on. Now — after letting go of the Transpose button — everything we play in F# will sound in Eb. To go back to standard pitch, just press the Transpose button.

When you're transposing from a key other than C, use the Transpose lights as a handy-dandy chart. Figure out how many semitones away from your starting point your destination key is, find that interval above the lights, and note the key name underneath it. Hold down the Transpose button and play that key on the keyboard.

That's all there is to it. Though it's true that the KT Transpose button might be of less educational value than actually learning to play comfortably in every key, here's a little ear-training exercise to help make up for it. It's long been felt that different keys possess different emotional personalities. Try transposing around some favorite pieces of music and exploring how the different keys change the way the music makes you feel. ▬

Bio: Robby Berman is a musician hopelessly addicted to the key of F# major. He caresses all them black keys in New York's Mid-Hudson Valley. His latest album is "Rings and Rings."

DP/4: Program Changes Without MIDI Channels

Johnny Klonaris

If you're like me and you have more than one multi-timbral MIDI device, you're likely trying to squeeze a lot into a mere 16 channels. Yet if you've got a DP/4 and want to be able to call up any sort of config or preset, you may need to tie up five different channels. This article is about a set of System Exclusive (SysEx) commands you can use to let you get at any of the configs or presets. You should be warned that this is pretty much hacking, in the older sense of the word (or "truer" sense if you're one of us old people) of getting down into the lower levels of a machine to do something clever and at least a little bit pointless.

I should probably mention that you're going to need some way of entering SysEx commands into your sequencer (or similar tool, likely computer based). Otherwise, entertaining reading though this may be, it won't be very helpful.

The basic idea is to turn off MIDI for everything (or most everything) and send virtual button presses via SysEx to "operate" the DP/4. Note that Ensoniq does not include the SysEx messages with the DP/4; you have to mail away for them. I suspect that this is in part to prevent "casual" use of SysEx: folks trying it out just because it's in the manual (starting to sound like a disclaimer, huh?). You can make most any MIDI device goofy by sending bogus SysEx commands, so it's good advice to be careful. That said, one good way of learning how to use something is by example.

I've tried to make sure that these examples work and won't cause problems. If you start having problems, please don't immediately run to the phone and call Ensoniq (or me for that matter). There are lots of chances for something to go wrong, but I don't think we're going to make your DP/4 goofy. At least not by accident.

Setup

This grew out of my need to be able to call up a preset, in this case the 4U preset 68, "MetalMaster Gtr" and disable unit A for a song, so that my puny mind would not have to actually remember something (or perhaps it grew out of my need to kill a couple of hours, I'm not sure). In any case, my DP/4 is set up to accept program changes on channel 16 for the config presets. This is the setup I'll be using for the example I'll describe. I'll mention a little later how you might experiment with actually calling up programs with no channels dedicated to the DP/4.

Note that you don't have to set this up exactly the way I do. This is just one way of setting up the DP/4, so that only program changes are received on channel 16. The rest of the article will still apply if you receive data on other channels, it will just be a bit more pointless.

To set up your DP/4 to receive Config preset changes on channel 16, do the following steps:

- Press the System button.
- Press the A button. This takes you directly to 00.
- Use the right arrow to advance to 01.
- Disable MIDI (if necessary) by turning the knob counter-clockwise.
- Use the right arrow and knob to repeat the process for parameters: 08 (Unit B), 15 (Unit C) and 21 (Unit D).
- Use the right arrow to select 28 and set the config channel to 16 (or whatever you prefer).
- Set parameter 29 to "Enabled."
- Set parameter 30 to "Received."
- Press the System button until it shows 50. Set 50 to 01 with the knob.
- Set parm 51 to "Enabled."
- Set 53 to "On."

At this point the DP/4 should be set up ok to accept the data we're going to send.

Now we're ready to start sending data to it. The data consist of a single program change to call up the 4U Presets, some button presses, knob twiddling, and more knob presses. Fun all around. Specifically, for the example case, we're going to do this:

- Call up config "program" 50 (Select 4U Psets)
- Press "Select"
- Press "A"
- Turn the knob to "68," "MetalMaster Gtr"
- Press "Select"
- Press "A" to disable that unit

I used my sequencer (Bars and Pipes Pro on my Amiga 500) to enter the necessary data directly into a track. This is where you're going to need to understand how to get your sequencer to send SysEx data, preferably as part of a sequence. You're going to need to leave some time between some of the commands or the DP/4 will pout. I'll describe what I did with Bars and Pipes Pro (which runs on the wonder of wonders, the Amiga and that "windows" thing too). I'll try to keep it general enough for most sequencers.

The first thing you want from above is the program change to

call up the "Select 4U Psets" config: number 50. This should be simple enough, edit in a program change to 50 in your track (attached, presumably to channel 16). If you play the track, you should see a big red 50, and "Select 4U Psets" on the top line of the character display.

If you were doing this manually, the next thing you would do would be to press the Select button. This is where we finally get into the SysEx. What you need to do is find a way to make your sequencer send out SysEx messages. In B&P Pro, I simply make sure that I'm displaying SysEx for the track and click with the pencil. I then enter SysEx bytes one at a time (I also have to remember to turn on "System Exclusive" in the MIDI out tool).

You need to send two messages, one for the button down, one for the button up. They look like this, including the SysEx head and tail (in hex):

	Header			ID	Msg	Cmd		Button		EOX
Button Down:	F0	0F	40	00	00	01	00	02	00	05	F7
Button Up:	F0	0F	40	00	00	01	00	02	08	05	F7

The only difference is the next to last data byte is a 00 for down and 08 for up. The 05 in the last data byte is the button number for Select. Sending this sequence to your DP/4 is equivalent to pressing the select button (cool!). However, I find I need to leave a fraction of a second between the messages or I get an error. If two messages are too close together, the DP/4 will show:

SysEx Message 01
Receive Error 03

This means you need to insert more time between messages. An eighth note at a moderate tempo should suffice. A quarter to half second seems to work ok for me. Experiment with the spacing until you don't see the error.

If you've got this working, the Select button light should now be on. Next is to press button A so that we'll actually be selecting a 4U preset when we turn the knob. The easiest way is to copy the previous pair of SysEx messages and then modify them. I found it convenient to display lyrics and enter a single word that described what the SysEx messages were, like "select" and "buttonA," etc. Came in mighty handy when copying and moving things around.

In any case, you want to copy and modify the previous pair of messages to change the last data byte from 5 to 0 to reflect the A button. The messages should look like:

	Header			ID	Msg	Cmd		Button		EOX
Button Down:	F0	0F	40	00	00	01	00	02	00	00	F7
Button Up:	F0	0F	40	00	00	01	00	02	08	00	F7

After you've sent this pair of messages, the letters of the first unit in the display should be all CAPS. We're almost there.

The next SysEx message is the knob turning command. The VIRTUAL knob turning command — cool as it might be, the knob doesn't actually turn. If you thought it would, you're being way too imaginative and that probably explains why you're involved in music!

Anyway, the command looks very much like the one above. The differences are in the last three data bytes. The command changes from 02 to 03 and the last two bytes represent the direction and amount of the knob change. In our example case, we want 4U preset 68. Since we're still at 50 from the sent program change, we want to turn the knob clockwise, 18 positions (12 hex). The command is:

	Header			ID	Msg	Cmd		Knob		EOX
Knob turn:	F0	0F	40	00	00	01	00	03	08	12	F7

More on the format of this command in a moment.

After this has been sent out, the select button should be blinking (or if you have Auto-Load Preset [55] set to Yes, the preset will self-select after a second). All that's left to do is to "press" the Select and then A buttons by duplicating the SysEx messages from above, and we've completed our example. If you have not changed 4U preset number 68, you should see:

Metal Master Gtr
AMP>spk>pit>rev

With a red Bypass light on over the unit A button.

Generalizing

You can use the program change and the virtual button and virtual knob SysEx messages to pull up most any combination of presets you want on the DP/4. The general form of the commands are below as follows:

	Header			ID	Msg	Cmd		Button		EOX
Button down:	F0	0F	40	00	00	01	00	02	00	xx	F7
Button up:	F0	0F	40	00	00	01	00	02	08	xx	F7

Where xx is the button number. In hex, the numbers are:

00	A (Unit A)	07	System
01	B (Unit B)	08	Left Arrow
02	C (Unit C)	09	Right Arrow
03	D (Unit D)	0A	Cancel
04	Config	0B	Write
05	Select	0C	Foot switch 1
06	Edit	0D	Foot switch 2

Simply plug in the correct number as the last data byte, and

send the messages. Remember to always send both the button down and the button up commands.

The virtual knob command is very similar, but requires some honest to goodness second grade math.

	Header		ID	Msg	Cmd		Knob		EOX
Knob turn:	F0	0F 40	00	00	01	00	03	xx	yy	F7

The knob "value" is coded into two numbers xx and yy above and represents a direction, and an amount from 0 to 63. Once you've decided on the value for the knob and the direction, you want to divide the value by sixteen; use the quotient for xx and the remainder for yy. If you want the knob to be turned clockwise, add 8 to xx.

Or, stated more in the bit domain: send the high order nybble, then low order nybble of the byte: d0nnnnn — where d=1 is clockwise, and d=0 is counter- clockwise, and where nnnnn represents the number of knob clicks in the range of 0 to 63.

Customizing

One thing left as an exercise for the student is to make this work without tying up any MIDI channels. What you'd have to do is select the type of preset from the config completely by virtual buttons and virtual knobs. Keep in mind that you'll have much less of an idea what state the DP/4 is in, since it didn't just receive a program change like above. Also, when selecting things with the virtual knob command, remember that you probably don't know where the knob "is" when you start. One way would be to rotate the knob at least 100 positions in one direction or the other to know that it is at one end of the range. This means a knob change could involve 3 virtual knob commands: two to get you to one end, and one to position you where you want to be.

Trouble shooting

There's lots that can go wrong. With SysEx messages, one character typed wrong can make all sorts of things happen. The most common problem for me was keeping the messages spaced out enough so that I didn't get the error 03.

The errors are displayed on the panel for about a second. Try to keep the DP/4 in sight when the messages are going out to see if one of these turns up. The message will be as shown above, with a receive error that is one of these codes:

Code	Meaning
01	Receiver time out (>1 second since last byte of message was received.
02	EOX (End of Exclusive F7h) was received when command code data was expected
03	DP/4 was still processing previous command.
04	EOX received when other data was expected
05	The byte received after the data block was not EOX.
06	Command message contained an invalid or illegal argument.
07	Parameter value in command was illegal.
08	Button number in command was illegal.
09	Knob value in command was illegal.
10	The preset received by the DP/4 was not automatically loaded because its type was incompatible with the current configuration.

Other than that, just be careful and you should be able to call things up that you maybe thought you couldn't.

Note that when you're trying to select a value for the knob, remember that it's not an absolute value, if you send a value of five to try to get your preset, and discover the correct value is six and send that, you've just turned the knob 11. You'll need to resend the whole sequence to try it out again.

Another problem I had is that Bars and Pipes Pro likes to send out the "current" program change on a track when the track stops. This works fine in almost all situations, but this is a bit goofy — the lone program change in my track winds up sending me back to the Config Preset 50 "Select 4U Psets." I worked around it by playing the track and turning it off while the track was still playing.

Other than that, between working up the sequences and writing this article, I've managed to get out of trying to lay down that solo guitar track for one more night! Ah, diversions...

Plug

While I've got your attention, I thought I'd put in another plug for the Mirage-Net. This is a mail based "network" of Mirage aficionados. It's low traffic and mostly just a way to keep connected to any Mirage info that might be handy. To join, you need to be able to send and receive Internet mail. If you're interested, send a message to me at: mirage-request@hpdsojk.cup.hp.com, and include your address. I'll send you back some goodies. From CompuServe, you can access the Internet via: >INTERNET:mirage-request@hpdsojk.cup.hp.com. Sorry, no World-Wide Web server just yet — we have a firewall! ▬

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EPS	2.49/2.40	SQ-R	1.02
EPS-M	2.49/2.41	SQ-R 32	2.03
EPS-16 PLUS	1.3/1.00F	SQ-R PLUS	1.15
MASOS	2.0	SQ-2	1.2
MIRAGE	3.2	SQ-2 32	2.03
ESQ	3.5	SD-1/SD-1 32	4.10/4.10
ESQ-M	1.2	DP/4	1.14
SQ-80	1.8	KS-32	3.01
VFX	2.30	ASR-10	2.5/1.5
VFX-SD	2.1/2.00	KMX-8	2.00
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Realistic Drumset Programming

Part Two — The Act Itself

Paul Bissell

Welcome back. Last time we built a partial drumset for the EPS by copying samples from the Ensoniq disk ED-014 *Choice Drums* and made some modifications that may help to add realism to sequenced drum tracks. This time we're finally going to talk turkey about the drum part itself. I want to warn you ahead of time that I may be too opinionated for your taste so try not to get offended if I step on your programming toes.

Vertical Drumming

First of all let's talk about two different styles of drumset playing. The first is called Vertical Drumming (layering). It is what most of us hear on pop/rock radio and also how many programmers construct drum parts. Each instrument is layered on top (vertically) of the others. Many musicians use the looping technique when recording drum parts. Loop recording is when the sequencer loops a given area in record mode and the programmer adds a new instrument each time around. The Ensoniq sequencers have this function (RECORD MODE=LOOPED). This is in fact the way all drum machines record their sequences thus giving the unedited track a very thick "drum machine" sound to them. While this is a quick way to initially record the track, one ought to edit out some of the excessive verticalities (like bass drum, crash cym, and struck hihat) and other un-drummer like programming. Take a look at Example #1, notice that the hihat plays every 16th in the measure and the snare and bass layer their parts underneath. When the drums are hit, they play at the same time as the hihat, thus verticalities take place on a regular basis. Hence, vertical drumming. This example can also serve to mention that this pattern would be impossible to play as written at a moderate or fast tempo. The drummer would have to use two hands to play the hihat part, bringing down a hand to hit the snare thus making hihat and snare verticalities impossible without resorting to an awkward sticking. Example #2 is the way most drummers would realize this particular vertical pattern.

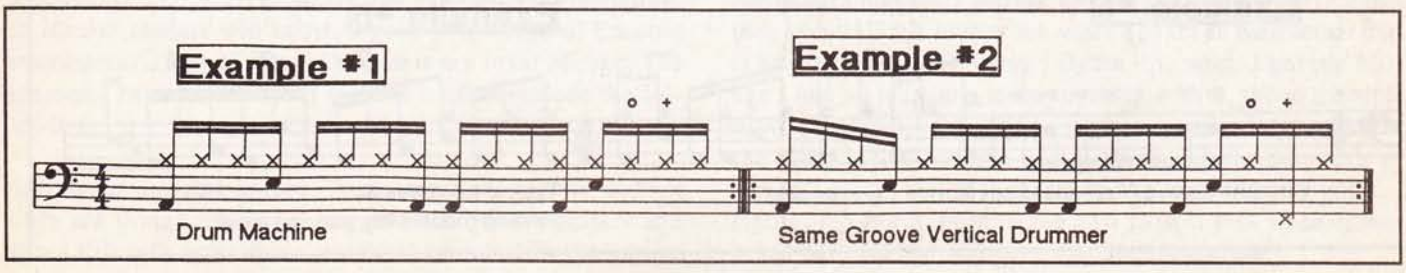
Linear Drumming and Ghost Notes

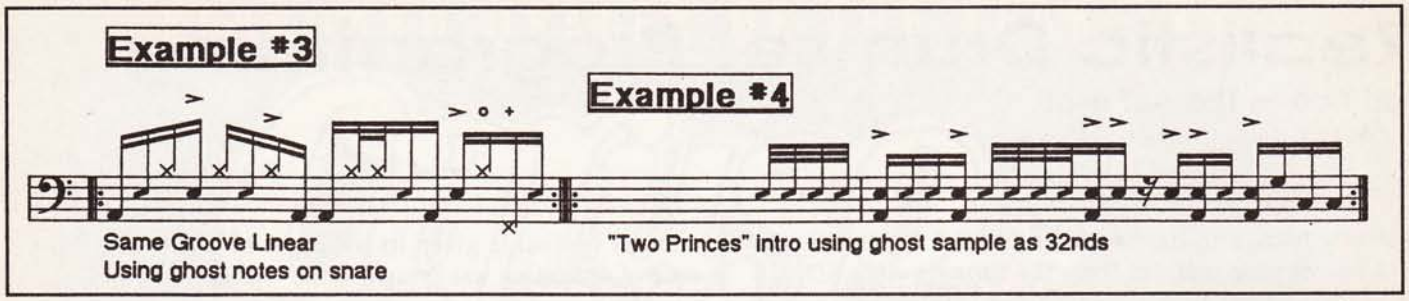
Linear drumming is a type of scoring for drumset where each drum or cymbal is given its own spot in the texture. This style of drumming was created in the '70s funk era and mastered by drummers such as Harvey Mason, David Garibaldi, and the legendary Steve Gadd. One aspect of this style is the regular usage of Ghost Notes. These are softly played notes usually on the snare which fill in the gaps between louder, accented notes. These soft notes are great for defining a groove without taking up much space in the sonic texture. Last time we created a sample to use as a ghost note so refer to that article for the programming of a good sound. Example #3 is a "linearized" version of Example #1 and #2. Program all three to see the difference of implied style and sonic texture.

Effects and Reverbs

Let's talk production. The type and amount of effects you use to process your drumset will add to the realism. While it was fashionable to have deeply reverbed and/or gated drums in the '70s and '80s, the modern recording sound is a clean, bright, tight room which is very reflective. Check out the album *"Counterparts"* by the band, Rush. The signal processing of the drums was held to a bare minimum and the performance of Neil Peart (the band's drummer) is first rate. Listen to the presence of the room which the drums were put into. There's even a verbal count off on the opening track which helps to get a feel for the reverb. Another really good example is that single from The Spin Doctors. No, not that *"Little Miss Little Miss, etc."* song, but the *other* one, *"Two Princes."* Listen to the opening drum fill. Very reflective and bright. Example #4 is the fill transcribed showing how to use the ghost note sample as 32nds.

You can achieve a quality reverb sound quickly by using the ROM-03 ROOM REVERB in your EPS. Make it the Inst Effect by pressing Command-Effects. Also check out the parameters inside of the reverb. There is a variation called BRIGHT ROOM which is really great. I modify the effect when I use the Fusion Drums disk and use the following parameters: DECAY TIME=70 (Helps bring the drums forward) LOW FREQ DECAY=+20 (A little more boom in the





bass) HI FREQ DAMPING=0 (I want all the highs I can get) HI FREQ BANDWIDTH=99 (Lets all the high end into the effect). I don't have to mention that any distortion, flanging, etc., will mask the details which make up your "real" performance. One last tip: Don't hide the drums in the far corners of your mix. The more you hide it, the more negatively it stands out. Be Bold!

Quantization, Fills and Final Editing

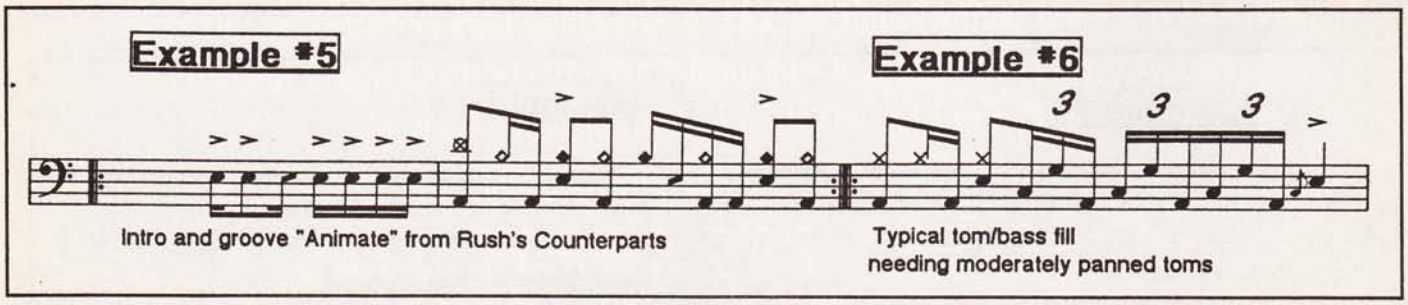
To quantize of not to quantize, that is the question. Actually I use both. Quantizing a drum track to the appropriate note value grid is a quick and easy way of getting the drum part grooving. As long as you use all the techniques we've talked about previously to enhance your drum sound, a perfectly timed performance is NOT going to be correlated to a programmed sounding part. Just know that almost every professional drummer practices to a click or drum machine at some point and will do two or more takes of any recording track to get it right. Why? Usually to be more dynamic and... *rhythmically accurate*. I sometimes use a hybrid approach, quantizing the bass and snare (loud snare) but free handing the snare ghosts, hats, and other cymbals. Remember that a perfect timing of any one track will need a perfect matching timing of the other tracks. Sometimes parts will stand out as "out of time" only after you quantize a different track. In the end a machine sounding drum part is not fingered for the absolute of its timing.

Realistic drum fills can go a long way to adding the spice of a real drum part. A human drummer rarely plays the same fills for each break. Even if the location of the fill is repeated (like going from the A section to the B section), not often is the drummer going to use the same lick. Make variation of the same fill and use them at those moments. Many times a drummer will use a variation of a fill played earlier because he/she can't remember exactly how it went the first time through! One does not have to use a lot of notes on fills either. Many times a fill can be a slight change in the drum pattern and that change will give the music the motion it needs to move smoothly to the next section. Remember *"Every Breath You Take"*? How could you forget, right? What does Stewart Copeland (the most un-machine of all rock drummers) use to propel the song into the long awaited bridge... a flam on beat two and a bass drum/cymbal combo on four. It is that lowly flam that gives the song's texture the kick it needs and prepares us for what is coming next.

While we are on Sting tunes, check out Omar Hakim's playing on *"Children's Crusade"* from the album (CD) *"Dream of the Blue Turtles."* The fade in is a one bar vamp. Each bar, the drum pattern (linear in this case) is played differently and gives motion and interest to the piece. Also the remake of "Shadows in the Rain" from the same album is a great example of helping to define a groove with ghost notes.

The Choice Drums disk we used to take samples from doesn't come with a ride played on the face of the cymbal, only a cutting bell sound. Go ahead and copy the ride cymbal bell from Choice Drums into our Fusion Drums layer 1. Then make a parameters only copy this wavesample (WS=10) to Fusion Drums layer 1. Change the WS Range (of our new WS=11) to LO=A3 HI=A3+. Press ENV 3 and change the HARDVEL =70 80 80 60 40 and the TIMES=20 20 20 20 60. Again, I think the panning is a bit extreme. I would bring both ride samples in to +40 or so. While not exactly perfect in sound, used in proper context it is quite convincing (Example #5).

Some final words about panning. Don't over pan your drums. A nice stereo separation most definitely adds to the realism of the track, however fast fills (Example #6) that juxtapose drums panned too far away sounds very awkward. Also it is interesting to note that the drums on different records are panned opposite of each other. The fact I notice, however, is



that a recording where the drummer has some creative control over the mix has the ride panned to the right, and the toms are high to low-left to right, as if you were behind the drums. Many other recordings which are "producer dominated" (such as debut albums, etc.) have the drums panned as if you were listening to them out front. No right or wrong, just point of view.

I swear I could go on for days with tips for programming, but I hope you've got an idea of a few basic facts to add verismo to your tracks. A combination of the above and previous tips, a discriminating ear, and of course your own creativity will give your sequenced tracks the life they need. ▬

Bio: Paul Bissell is the percussion instructor for La Tech University. He has been there-done that, and composes run on sentences in his home studio Go Fish Music where he lives with his beautiful wife Kim and their cat "Kitty."

A 10th Anniversary Look at the Mirage

Barry Carson

As a citizen in the Ensoniq universe in the year 1994, I feel the urge to look back ten years to the unveiling of the original Ensoniq keyboard instrument, the Mirage. As people who live by the decimal system, we like ten year chunks of time, although talking about the Mirage maybe we should wait for the 16th anniversary. Since the Mirage speaks to the user in hexadecimal or the base 16 number system — in hexadecimal it is the Mirage's Ath anniversary).

Speaking with the skipperette of the Good Ship *Hacker*, I found out that most of our readers don't even use Mirages anymore. But, with 2nd-hand Mirages around at all kinds of great bargain prices these days and with more than a few ASR and TS owners who probably have a Mirage stuck in a closet someplace, this might be the perfect occasion to go back and take a look at the keyboard that started it all for the *Transoniq Hacker* family.

The Mirage was, of course, the first digital sampling instrument in the price range that most regular people could afford. There were actually several versions of the Mirage: the first was in a metal case with the disk drive between the left end of the keyboard and the mod and pitch wheels. This was the Mirage with the strange feeling keyboard. Later models had a jazzed up paint job, colored buttons and a great weighted keyboard. The last Mirage was labeled the DSK and was built into the familiar plastic case Ensoniq later used for many of its other instruments. The DSK had stereo outputs although a few hackers "stereoized" their earlier Mirages.

In my MIDI studio I've been lucky enough to have a fair assortment of high-tech samplers and synthesizers (including, as *Hacker* readers will know, a good percentage of Ensoniq instruments). Part of this collection is my loyal Mirage. The reasons I have held on to it and use it often include the following:

1. It has an amazing library. There are tons of sounds, and not only are things like the piano, electric piano, guitars and saxes still very serviceable, but some sounds, like the fretless bass, the oboe, the mandolin, the last version of the bowed strings (among others) are quite good. Some of the best sounds are really unique to the Mirage — "Ta" and "Doo" are percussive vocal sounds unlike anything I've heard come out of most keyboards. Vocal "Do" (not to be confused with "Doo") is even better. Do they sound like real singers? Do they sound like the vocal disks for the 16+? No way. Do they sound neat? You bet they do. Of course, all these keen sounds can be loaded directly into an EPS or 16+ or indirectly into an ASR, but they just don't sound like a Mirage (see #2).

2. Nothing sounds like a Mirage. Lots of top performers and producers are now rediscovering this fact. The grungy, eight-bit, low-fidelity sound of the Mirage is mighty pleasing to the ear. Even during the mid '80's people would pass over the much cleaner, higher fidelity instruments like the Prophet 2000 or Roland S-10 or S-50 to get a Mirage. Mirage short loops, while being almost impossible to get, can create great, sweet sounding synthesizer waveforms — grungy and dirty but sweet sounding. In a business where a highly desirable sound is that of a forty-year-old guitar played through a wildly distorting thirty-year-old tube amp, ya gotta go figure.

3. It's neat. I mean, it has a flickering yellow display. It has less buttons on it than most calculators have. It has 1/8 meg of memory. It has a single-sided disk drive. It can have stereo outs that bounce its sound all over the stereo field. It has the world's most basic sequencer. It has a number of odd and sometimes quite useful operating systems that turn it into something other than what it usually is.

Sometimes one hears Mirage owners bemoaning the fact that they spent all this money ten years ago on an instrument that is now worthless. The way I figure it is when I got my Mirage I had no idea how to do anything with it, it had a couple disks of samples, and it had a pretty neat sound. Now I know the thing inside out and upside down, I have hundreds of samples for it, and it sounds just like it did when I got it. I figure it's worth more to me now than it was when it was brand new. Happy anniversary to the Mirage! ▬

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Eight Steps Toward Improving Your Composing Skills

Jeffrey P. Fisher

"I've never known a musician who regretted being one. Whatever deceptions life may have in store for you, music itself in not going to let you down." — Virgil Thomson

You want your musical skills to get better and better, right? Of course you do. If you are nowhere close to reaching your peak performance it's because you don't understand the process that helps you produce your best music all the time. Here's what you must do to constantly improve your talents:

Compose something every day — The best way to make sure you get the most from your talents is to use them. This is simple advice, yet crucial. Write a piece of music every day. This doesn't need to be extravagant or even complete, rather just put your first thoughts down on paper, tape, disk, etc. Make composing part of your daily routine. Not everything you do will be good, but the exercise will yield some bits and pieces that you can later turn into something special.

Too many people believe they must be in a creative mood to compose. It's infinitely easier to procrastinate than to just start working. You can't be seduced by this unfortunate behavior.

Don't worry about style or if you are composing something worthwhile. Write first to please yourself. If you let your inner voice of judgment interfere with your creative flow, you severely inhibit your possibilities. Turn off those messages in your head and let go. Get into a routine. Write at the same time each day. If you are especially strong in the morning, get up a little earlier and start composing. Late night your strength? Set aside an hour before going to sleep just so you can capture your energy in a musical sketch. You can't always write just when you feel like it. Music is both art and craft. You can learn and practice the craft aspects. And you must find the method that works for you!

Regardless of your working method, make sure you practice, too. Don't confuse doodling around with being serious and truly creative. You must expend some energy and use some time to sharpen your skills. I play and goof around all the time. And I set aside time to seriously compose, too. I go back and listen to my doodles and transform them into stronger more structured pieces. This keeps me fresh and original.

Listen to music every day — Take that oh-so-important music bath every single day. If you're like me you have tons of music in your collection from Aztec Camera to ZZ Top. Don't just play it in the background, though. Take time from each day to really sit down and *listen* to the music. Study it carefully and then apply what you learn to your own work. Will this affect your appreciation of your favorite tunes? I doubt it. You will gain a keen awareness of music composition and a greater respect for other artists.

For this to be a truly useful tool, you must scrutinize every note, every phrase. First ask yourself why and apply these answers to your own work: Why that progression? Why that instrument? Why a countermelody there? Why slapback echo here? Next, ask yourself how the composer used a certain technique, instrument, or phrase. Make sure you recognize what is art (why) and what is craft (how). If you record music too, first listen to the music and then concentrate on the recording techniques.

Finally, listen to a particular piece repeatedly until you've exhausted every possibility. Then put it away and don't listen again for a few weeks. Now come back to it and see if you hear or feel anything new.

Imitate other composers by writing in their style — This is a natural extension of the listening step above. The easiest way to grow as an artist is to get inside another composer's head, first by listening and second, through imitation. Many musicians learn by copying their favorite songs. While this is useful toward improving your mechanical skills, imitation is critical to improving your composition skills.

Pick artists you admire and compose in their style. Don't just copy their songs. You must try to write a piece *as if you were* the artist. To imitate without directly copying is harder than it sounds. Yet, this assignment tells you much about music, how other composers think, and what this means to you.

Don't ignore this exercise. Why reinvent the wheel? Learn from the masters first by listening, second by playing, and last through imitation. Then let go and use what you've learned to discover your own music. This won't happen overnight, but your critical study will pay off in time.

Try other styles and forms of composition that you usually ignore. Okay, so you're a rocker. Consider composing for string quartet. No matter what your level of talent is, try this:

Choose a simple tune like *Row Row Row Your Boat* and try to write multiple versions in various styles like rap, jazz, orchestral, new age, etc.

Choosing a simple, familiar tune means not having to worry about the melody. You are free to experiment with structure, chords, countermelodies, and so forth. Just because you don't like or aren't comfortable in a particular musical genre doesn't mean you shouldn't give it a whirl. Also, try playing an instrument you don't normally play. If you play keys, take up guitar. You'll gain useful, new perspectives.

Creativity means looking outside the boundaries. Don't stay tied to a single way of doing things. Try many different approaches. You'll find the solution if you open up your mind to all the infinite possibilities. Leaving your comfort zone is the doorway to your best work. You will find the true creativity within. Do you really want to risk shutting out this world and stifling your musical talent?

Play your pieces for friends and associates and ask for criticism — Find someone whose opinion you trust. Ask for their help and constructive ideas. Don't apologize or interrupt. Just play your music all the way through and then ask open-ended, leading questions. Next, play the track again and analyze it in detail. Someone with musical knowledge means you can discuss the track on the same level. Wives, girlfriends, husbands, boyfriends, and your mother's opinion are worthless with this exercise. No offense, just the truth. Once you get opinions and advice, go back to the drawing board and put all you've learned to work and repeat the process.

Seek advice from a recognized expert — Find a mentor to review your work. Objective opinions, constructive criticism, and useful suggestions will really open your eyes and give you insight into your work. Once again you are looking for constructive criticism. "That's good" just isn't what you need. You want specific information about how to make your work better and stronger. And you want to learn from your mistakes. Take advantage of expert knowledge and benefit from professional, objective expertise.

There are many ways to get this valuable information. You might try professors at your local college or university. Maybe there's an area musician you admire and who might evaluate your work. A songwriter's group might be another alternative. You might send your tape for review in this magazine. A review in *Hacker Tapes* can be eye-opening.

Produce your demo and send it into the market — Once you've been following the above steps diligently, you will be ready to put together your killer demo tape and start marketing your music talents and services. This is the real test of your skills. Don't fret rejection, use it to your advantage and make your work stronger.

Evaluate your past work — Don't let your old music fade away. Dust it off and give it a critical listen. I once discovered an old song on a long-forgotten tape, reworked, recorded, and turned it into a jingle for a major advertiser. Once you've let music sit for some time, the warts really stick out. Use this distance from your work to improve your past, present, and future music. Don't expect to get everything right the first time. The real work is in the transformation from sketch to full blown song or score.

Consider following this eight-step process throughout your musical career. It is essential to making sure you grow as an artist. Here's to your continued improvement and success.

And now it's my turn to earn the rent... Get your *free* one year subscription to the *Musician's Business Building Bookshelf* with over three dozen recommendations on how you can be more successful. If you are tired of spending all your money and want to start making money from your talent, this has exactly what you need!!! To get your free subscription send your name, address, and telephone number to: Jeffrey P. Fisher Music, 924 S. Lake Ct., Suite 209, Westmont, IL 60559 or call (708) 971-1641.

Bio: Jeffrey composes scores, jingles, and sound designs for commercials, business TV, and films.

Tested and Approved Hard Drives for the EPSs

The drives listed below are known to be compatible with the EPS and EPS-16 PLUS *at the time of testing.* Changes in firmware or hardware by drive manufacturers may make later versions incompatible (with the exception of **PS Systems, Ramtek (Eltekon),** and **Frontera** whose drives are configured to work specifically with Ensoniq products). Drives *not* included on this list may also work just fine. For up-to-date information about specific drives call Ensoniq Customer Service: 215-647-3930.

MANUFACTURER	MODEL
Dynatek	All Models
Frontera	All Models
PS Systems	All Models
Ramtek (Eltekon)	All Models
Rodime	45plus, 60plus, 100plus, 140plus
Microtech	R45, N20, N40, N80, N100, N150
PL1	45 Meg Removable
Mass Micro	Datapack 45

Drives Reported to Work by Readers

The following drives have been reported to work satisfactorily with reader's EPS systems. No guarantees — but they'll *probably* work with yours. Try to try *before* you buy.

Jasmine Direct Drive 100	Quantum 100M, 210M
PowerDrive44	Seagate 80M
Syquest 555 (removable)	Tech Data Model 60e

Whine, Women and Song

Jeffrey Rhoads

I always seem to be just a little out of sync. It must be hereditary. For example last month when it was time to reset the clocks, everyone I know set their clocks back an hour. You know — "Fall Back." I "fell back" all right... by a month.

By the time this hits your mailbox it'll be closer to Thanksgiving than Halloween (after both) so the ghostly "She Crys" should sound more like a turkey. (Yeah, yeah, I know... but at least try and resist the temptation.) Should I then have programmed a Gobble? Sorry all you hackers and hackettes, 'fraid you're stuck with "She Crys." After all, it was programmed on Halloween. Better late than never.

The basis for She Crys is straightforward enough; it uses three CHOIR waves. Three waves, three voices. Voice 1 acts as the severely delayed "Ah" while voice 2 represents the backward "Aho." Voice 3 is "her" full choir of tortured souls. And, since She Crys spins its dark tale of she-who-is-trapped between "here" and "there," it must be a sound with a gender. Her cries are best heard between C4 and G7. A warning! Do not add to her pain by increasing voice 2's Volume at its Output. She could damage your speakers. (I never said she was a friendly spirit.) If you need to change voice 2's level, particularly at C4 and below, try using the KBD-SCALE in the Output. Or, go to the Wave button and experiment with the MULTISAMPLE shift for some tonal variation. And as long as we're looking at the Wave screen (page1) notice that the wave's DIR = REVERSE. This helps to give our lady her rueful, otherworldly lament. (Insuring that at least one of her cries will be heard by the living.)

Her Host from The Other Side, Voice 3 in our dimension, makes use of fairly long, sustaining Envelope 3 levels, but it is the unearthly utterances of Voices 1 and 2 that reach this side at different times. Envelope 3 for Voice 1 shows a PEAK Level of 53, a Break1 Level of 99 and a Break 2 Level of 42. Sustain, however, only reaches 15. The Decay 1 setting of 40 indicates that it takes almost a second of time (see the chart on page 176 of the TS-12 *Musicians Manual*) to travel from Peak to Break 1 while the distance from Break1 to Break2 is covered in a much shorter time span as the Decay 2 value of 18 demonstrates. Decay 3 =00, Sustain = 00 shows us that that Voice 1, in effect, begins and ends by the time we reach Break 2. This "voice" fades in slowly, develops quickly, and... dies.

Her unending sorrow is reflected in the Pitch Mods Section for Voice 1. As if gasping for a final breath, her voice rises feverishly... MODSRC = ENV-1, MODAMT = +80... only to dangle lifeless at the end of a lampcord thrown over the hardwood beam overhead.

The LFO for voices 2 and 3 has a RATE = 00, and employs MODSRC = PEDAL. She shakes but slightly and slowly as she makes her anguished call.

Finally, the tragic place from which she will never escape forever "echoes" her mournful scream. Effect # 59 PITCH SHIFTER + DELAY, VARIATION = USER offers the most pronounced consequence on her doomed spirit. The EFFECTS MIX levels are set very high — FX1 and FX 2 PITCHDDL = 86. VOICE 1 and VOICE 2 LEVEL's both need to be pushed to 75.

The DELAY TIME L is radically different from DELAY TIME R. Thus, her shrieks come not once, but twice, from two separate places. TIME L =1070, TIME = 0015. All at once, the "source" of our lady's anguish is made plain. MOD -1 = WHEEL DEST = VOICE 1 LEVEL, MOD -2 = PRESS DEST = VOICE 2 LEVEL. The cold, black infinity of nothingness is matched only by her agony and woe as "She Crys."

00 = "She Crys"
0* = Voice1 up 1 Octave + Voice 2
*0 = Voice 3
** = Voice 2 up 1 Octave + Voice 3 down 1 Octave

So, better late than never, right? ▬

Change of Address

Please let us know at least four weeks in advance to avoid missing any issues. The Post Office really will *NOT* reliably forward this type of mail. (Believe us, not them!) We need to know both your old and your new address. (Issues missed due to late or no change notification are your own dumb fault — we mailed them!)

TS-10 Hackerpatch

TS-10 Prog: SHE CRYS

By: Jeff Rhoads

WAVES	1	2	3	4	5	6
Wave	Choir	Choir	Choir			
Wave Class	VocalSnd	VocalSnd	VocalSnd			
Delay	0000	0000	0000			
Shift/Index	00	+06	+10			
Direc/Modsrc	Forward	Reverse	Forward			
Modamt	00	00	00			
Sample Start	00	00	00			
Start Modsrc	Off	Off	Off			
Modamt	00	00	00			

MOD MIXER	1	2	3	4	5	6
Src-1	Pitch	Off	Pitch			
Src-2	Mixer	Pitch	Press			
Src-2 Scale	4.0	1.0	4.0			
Shape	Convex2	Smoother	Linear			

PITCH	1	2	3	4	5	6
Octave	-1	-1	+0			
Semitone	00	00	00			
Fine	-09	00	+10			
Glidemode	None	None	None			
Glidetime	-	-	-			

PITCH MODS	1	2	3	4	5	6
Modsrc	Env1	LFO	Env1			
Modamt	+80	+23	+10			
Bend	Sys	Sys	Sys			
PitchTbl	Sys	Sys	Sys			
Env1	+03	00	-02			
LFO	-05	00	+03			

FILTER 1	1	2	3	4	5	6
Mode	LoPass/3	LoPass/3	LoPass/3			
Cutoff	079	061	030			
Kbd	-10	+08	+20			
Modsrc	Mixer	Mixer	Mixer			
Modamt	+17	+80	+99			
Env2	+89	+90	+95			

FILTER 2	1	2	3	4	5	6
Mode	HiPass/1	LoPass/1	LoPass/1			
Cutoff	110	85	100			
Kbd	+37	+14	+00			
Modsrc	Timbr	Timbr	Off			
Modamt	+76	-50	00			
Env2	+09	+65	+80			

OUTPUT	1	2	3	4	5	6
Kbd Scale	+15	+73	+15			
Lo/Hi Key	A0-C8	A0-C8	A0-C8			
Vol (db)	+03	+05	-22			
Modsrc	Off	Off	Timbr			
Modamt	00	00	+30			
Dest Bus	FX1	FX2	FX1			
Pan	+25	-25	00			
Modsrc	Off	Off	Off			
Modamt	00	00	00			
Voice Prior	Med	Hi	Med			
Vel-Window						
Lo	000	000	000			
Hi	127	127	127			

LFO	1	2	3	4	5	6
Rate	00	00	00			
Modsrc	Env2	Pedal	Pedal			
Modamt	+24	+47	+40			
Depth	+43	-	-			
Modsrc	Pedal	Pedal	Pedal			
Modamt	+99	+99	+35			
Waveshape	Sine/Tri	Square	Sine/Tri			
Restr Mode	On	Off	Off			
Phase	000	000	000			
Delay	20	15	10			
Noise Rate	00	00	00			

Notes &Special Settings: Play a cluster chord in the upper register. Play with your elbow and forearm. Give the sound enough time to develop. Data Slider = Timbr, Mod wheel = Voice 1 Level-Effect, Press = Voice 2 Level-Effect, Pedal = LFO.

SELECT VOICE

00	1	2	3
0*	1	2	
*0			3
**		2	3

ENV1	1	2	3	4	5	6
Attack	29	04	00			
Decay	41	28	52			
Decay 2	57	32	28			
Decay 3	47	35	18			
Release	70	41	50			
Peak	33	46	54			
Break 1	22	40	52			
Break 2	17	32	45			
Sustain	18	40	49			
Vel-Level	00	00	00			
Mode	Norm	Repeat	Repeat			
Vel Curve	Conv1	Conv3	Conv1			
Kbd Track	00	00	00			
Vel-Attack	00	00	00			
Vel-Rels	00	00	00			

ENV2	1	2	3	4	5	6
Attack	22	00	00			
Decay	00	05	25			
Decay 2	25	10	35			
Decay 3	30	20	46			
Release	52	35	26			
Peak	43	73	64			
Break 1	60	54	67			
Break 2	31	47	53			
Sustain	00	00	26			
Vel-Level	09	16	50			
Mode	Norm	Norm	Norm			
Vel Curve	QkRise	Conv3	Conv2			
Kbd Track	+39	+20	+24			
Vel-Attack	00	37	37			
Vel-Rels	00	00	00			

ENV3	1	2	3	4	5	6
Attack	00	00	00			
Decay	40	70	68			
Decay 2	18	65	54			
Decay 3	00	52	45			
Release	00	00	40			
Peak	54	99	99			
Break 1	99	99	95			
Break 2	50	60	85			
Sustain	00	15	15			
Vel-Level	09	00	33			
Mode	Norm	Norm	Norm			
Vel Curve	Conv1	Cncav4	Conv1			
Kbd Track	+18	+10	+10			
Vel-Attack	00	00	00			
Vel-Rels	00	00	00			

PGM CONTROL (Page 1)

Type	Vocals
Option	Wavelist
Press	Chan
Patch	Live
Restrike	00

PGM CONTROL (Pages 2 & 3)

Atck	+57	V1	+23
Rels	+35	V2	+12
Bright	+63	V3	+15
Timbre	013	V4	-
Rate	-03	V5	
XCtrl	000	V6	

EFFECTS

Effect #59	Variation = User		
Effect Mix	FX1 PitchDDL=86		FX2 PitchDDL=86
Voice 1	Semi=+05	Fine=+23	
Voice 2	Semi=+07	Fine=+10	
Delay	Regen=-90	Time	L=1070 R=0015
	Mix=99	DryLevel=99	
MOD-1	Src=Wheel	Dest=Voice1 Level	
	Min=00	Max=99	
Mod-2	Src=Press	Dest=Voice2 Level	
	Min=00	Max=99	

The Curvature of VFX Volume

Kirk Slinkard

In the past, whenever I would synthesize around on my VFX-SD I would usually ignore the different response shapes available for the MOD MIXER and for velocity in the various ENVELOPEs. I assumed that the LINEAR curve would pretty much handle everything I wanted to do, just like on my SQ-80, and that the other curves were just for more exotic applications. But the more I played around on the VFX version of the CLAVINET D6 patch in Issue #107, the more I was bothered by the way it didn't really "feel" quite right. Something was wrong with the way it responded to velocity as compared to an actual Hohner Clavinet.

That's when I started wondering about the different velocity response curves. The owner's manual didn't have anything helpful to say about their application, nor could I find anything in the *Hacker*, even in Robby Berman's "Understanding Envelopes in the VFX and SD Synths" series of articles — possibly the definitive work on the subject. Although, in Issue 101, he did come close. He actually talked about some velocity curves, but even he didn't tell me what I really needed to know. It's like he was about to say it, but stopped short. One more sentence in his article, and my questions would have been answered. It's as if a carrot were being dangled in front of a donkey's face that he could never quite reach. Oh Fate, what a cruel temptress thou art! The slings and arrows of outrageous fortune were being flung at me by Robby Berman!

HOW COULD YOU DO THIS TO ME, ROBBY?! So I figured that I should make an experimental patch that would easily show the effect of some different curves on volume. The enclosed "VOLUMECURVE" patch uses the TIMBRE slider to change the volume of a basic sawtooth sound from zero to full on, using different curves or applications in each octave. Each one sends the slider through the MOD MIXER set to a gain of one. Be careful using the slider — if you move it too fast, it won't keep up with you. Also, you may have to move it all the way up or down to get it to kick in the first time you use it after you select the patch. But I think that the slider gives the best visual representation of what is going on with a real-time modulator. If you are using one of the three-voice-per-patch Ensoniqs (SQ-1, for example), it might be easiest to copy each octave here into a separate patch. If it makes translation easier, the default "FULL ON" envelope can be used for the volume envelopes.

The lowest octave shows how volume responds to a LINEAR curve — the one that used to be my favorite. Move the TIMBRE slider up and down and see how the volume stays very low for the lower half of its range of motion. Almost all of the action happens in its upper half. This is how the velocity was responding in the clavinet patch.

The next-to-the-lowest octave has the slider sent through a CONVEX-1 curve. Move the TIMBRE slider up and down. Now its effect on volume is more even. You get a smooth change in volume all the way up and down the slider's range. Armed with this new knowledge, I went back to the clavinet patch and looked at page three of ENVELOPE 3 (the volume envelope). There was the VEL-CURVE parameter set for a LINEAR response. So I changed it to CONVEX-1, and sure enough, now it plays just like an actual Hohner Clavinet. If you substitute the other CONVEX- curves, you will find that they have less smooth-sounding responses, but are not quite as extreme as the LINEAR curve.

The middle octave is just like the previous one except that it reverses the direction of the TIMBRE slider's volume control from the voice's output section. Since this is still set for CONVEX-1, you might expect a smooth slider response, just like in the next lower octave. But this one gets lots more bizarre in its response than even the LINEAR curve. All the action occurs right at the bottom of the slider's range. This would be completely useless for a reverse volume control. Of course, this doesn't mean you aren't allowed to use it. But if you do, I'll think of you as an uncivilized buffoon.

The next-to-the-highest octave also has the TIMBRE slider reversed, but this time sends it through a CONCAVE-4 curve. Now the TIMBRE slider adjusts the volume smoothly. This curve is more-or-less the exact opposite of the CONVEX-1 curve in the previous octave, which turns out to be ap-

Missing or Damaged Issues?

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propriate for the opposite direction of volume control here. This is the curve I should have used for the Vox organ mixture sliders back in issues #102 and #103.

The highest octave combines the concave and convex curves that have the smoothest action, giving you a crossfade effect. But one of the voices here has a different waveform. So as you move the slider up, you morph from a sawtooth wave into a square wave.

An interesting related phenomenon happens when you send the TIMBRE slider (or MOD WHEEL, or VELOCITY, or whatever) to control an oscillator's pitch. If it is sent through a LINEAR curve, or just straight to the PITCH MOD page without the MOD MIXER, the oscillator's pitch changes in the appropriate exponential fashion — nice and even to human ears. Curves other than LINEAR applied to pitch give uneven responses. So the oscillators and the amplifiers are set up differently from each other as to how they respond to modulators on the VFXs, and presumably on the more recent Ensoniqs as well.

Hopefully, this will give you a useful supplement to that !@&%*# Mr. Berman's series of articles. So now as I synthesize around, I have a few more things to consider, and I will never again think of curves only in relation to women.

Mod You Later. ▬

WAVES	1	2	3	4	5	6
Wave	Sawtooth	Sawtooth	Sawtooth	Sawtooth	Sawtooth	Square
Wave Class	Waveform	Waveform	Waveform	Waveform	Waveform	Waveform
Delay	000	000	000	000	000	000
Start	-	-	-	-	-	-

MOD MIXER	1	2	3	4	5	6
SRC-1	Off	Off	Off	Off	Off	Off
SRC-2	Timbr	Timbr	Timbr	Timbr	Timbr	Timbr
SRC-2 Scale	1.0	1.0	1.0	1.0	1.0	1.0
SRC-2 Shape	Linear	Convex-1	Convex-1	Concave4	Concave4	Convex-1

PITCH	1	2	3	4	5	6
Octave	+1	+0	-1	-2	-3	-3
Semitone	+00	+00	+00	+00	+00	+03
Fine	+00	+00	+00	+00	+00	+00
Pitch Table	System	System	System	System	System	System

PITCH MODS	1	2	3	4	5	6
MODSRC	Off					
MODAMT	-					
Glide	None	Same	Same	Same	Same	Same
ENV1	+00					
LFO1	+00					

FILTER 1	1	2	3	4	5	6
Mode	Lo-Pass/2					
Cutoff	127					
KBD	+00	Same	Same	Same	Same	Same
MODSRC	Off					
MODAMT	-					
ENV2	+00					

FILTER 2	1	2	3	4	5	6
Mode	HI-Pass/2					
Cutoff	000					
KBD	+00	Same	Same	Same	Same	Same
MODSRC	Off					
MODAMT	-					
ENV2	+00					

OUTPUT	1	2	3	4	5	6
VOL	+99	+99	+99	+99	+99	+93
MODSRC	Mixer	Mixer	Mixer	Mixer	Mixer	Mixer
MODAMT	+99	+99	-99	-99	-99	+99
KBD Scale	Zone	Zone	Zone	Zone	Zone	Zone
LO/HI Key	C2-B2	C3-B3	C4-B4	C5-B5	C6-C7	C6-C7
Dest Bus	Dry					
Pan	50	Same	Same	Same	Same	Same
MODSRC	Off					
MODAMT	-					
Pre-Gain	Off					
Voice Prior	Med	Same	Same	Same	Same	Same
Vel Thresh	+000					

SD & VFX Prog: VOLUMECURVE

By: Kirk Slinkard

SELECT VOICE						
00	1	2	3	4	5	6
0*	1	2	3	4	5	6
*0	1	2	3	4	5	6
**	1	2	3	4	5	6

ENV3	1	2	3	4	5	6
Initial	99					
Peak	99					
Break 1	99	Same	Same	Same	Same	Same
Break 2	99					
Sustain	99					
Attack	00					
Decay 1	00					
Decay 2	00	Same	Same	Same	Same	Same
Decay 3	00					
Release	00					
KBD Track	+00					
Vel Curve	-					
Mode	Norm	Same	Same	Same	Same	Same
Vel-Level	00					
Vel-Attack	00					

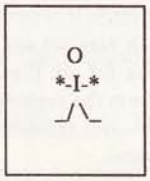
PGM CONTROL	
Pitch Table	Off
Bend Range	**
Delay	X1
Restrike	00
Glide Time	00

EFFECTS (1)
Effect
FX1
FX2

EFFECTS (2)

EFFECTS (3)

PERFORMANCE	
Timbre	00
Release	-



Bio: Kirk Slinkard hangs out near Denver, plays synthesizer, and collects and restores vintage rock stuff. His favorite color is ultraviolet and he's the same age as Marcia Brady (a year older than Kevin Arnold).

Prog: KARATE KID

By: Mark Haymond, Evansville, In.

Notes: This patch produces a nice Mystic Flute sound. The mod wheel adjusts the FX-1 mix for increased reverb.

WAVE	1	2	3
Select Voice	On		
Wave Class	Breathwave		
Wave	Chiff Flute		
Delay Time	011		
Wave Direction	Fwd		
Start Index	00		
MODSCR	Off		
MODAMT	000		
Restrk Decay	24		

PITCH	1	2	3
Octave	+0		
Semitone	+00		
Fine	+00		
ENV1	+00		
LFO	+05		
MODSCR	Off		
MODAMT	00		
KBD Ptch Track	On		
Glide	Off		
Glide Time	-		

ENV1	1	2	3
Initial			
Peak			
Break			
Sustain			
Attack			
Decay 1			
Decay 2			
Release			
Vel-Level			
Vel-Attack			
Vel Curve			
Mode			
KBD Track			

LFO	1	2	3
LFO Speed	33		
Noise Rate	00		
Level	22		
Delay	72		
MODSRC	Off		
Wave	Pos/Sine		
Restart	Off		

FILTER	1	2	3
Filter 1	3Lo		
Filter 2	1Hi		
FC1 Cutoff	056		
ENV 2	+45		
FC1 KBD	+24		
MODSCR	Off		
MODAMT	-		
FC2 Cutoff	067		
ENV2	+60		
FC2 KBD	-10		
FC1MOD-FC2	On		

ENV2	1	2	3
Initial	99		
Peak	71		
Break	65		
Sustain	50		
Attack	03		
Decay 1	59		
Decay 2	73		
Release	15		
Vel-Level	59		
Vel-Attack	00		
Vel Curve	Convex		
Mode	Norm		
KBD Track	+00		

AMP	1	2	3
Initial	78		
Peak	96		
Break	82		
Sustain	72		
Attack	08		
Decay 1	49		
Decay 2	64		
Release	17		
Vel-Level	00		
Vel-Attack	06		
Vel Curve	Convex		
Mode	Norm		
KBD Track	-28		

OUTPUT	1	2	3
VOL	90		
Boost	On		
MODSRC	Off		
MODAMT	-		
KBD Scale	00		
Key Range	C2-C7		
Output Bus	FX-1		
Priority	Med		
Pan	00		
Vel window	000		

EFFECTS — ROOM REVERB

FX-1	33	FX-2	00
Decay Time	40	Diffusion	22
Detune Rate	00	Detune Depth	12
HF Damping	26		
HF Bandwidth	33		
LF Decay	+38		
MOD (Dest)	FX-1		
BY (MODSRC)	Mod Wheel		
MODAMT	+40		

The Hack: Okay, I know there's an abundance of Chiff-This stuff out there but I think that the SQ Hackerland newcomer should have a chance to show off his/her wares. Besides, believe it or not, this sort of sound is actually making a New Age / Movieland comeback. So, in honor of the coming *"Karate Kid 87"* ...er, I mean *"Karate Kid 4,"* here's Mark's breathy entry.

"Karate Kid" is almost painfully straightforward. But, it's also simple and effective. This patch should have as much push as possible. Try these adjustments. In the Output Section set VOL to 99 and turn the BOOST On. The flute could use a bit of animation. You can use Envelope 1 to manipulate the pitch. Enter the following values for Env1; INITIAL=00, PEAK=20, BREAK=25, SUSTAIN=00, ATTACK=00, DECAY 1=10, DECAY 2=00 and RELEASE=00. (Don't forget to go to the Pitch Section: set Env1 to +01 or +02.)

To widen and warm this patch I used the DIST+CHORUS +VERB effect: let FX1=15, FX2=00, Decay Time=43, Dist Level=19, Chorus Rate=46, Chorus Depth=07,Chorus Center=50, Feedback=-29 and Chorus Level=72. Modulate the FX 1 Mix with the ModWheel, amount=33.

And finally, here's something very important to keep in mind. Every time you elect to use the "Karate Kid" sound in some project or composition, you may somehow be furthering the employment of Pat Morita.

Jeffrey Rhoads

Bio: Jeffrey Rhoads has been a keyboardist/composer on the Philadelphia Jazz and R + B scene for a period of time resembling forever. He has an interest in cinema and has developed some film courses. Jeff still believes in magic and longs for city lights.

Hackerpatch is intended to be a place where patch vendors can show their wares and musicians can share their goodies and impress their friends. Once something's published here, it's free for all. Please don't submit patches that you know to be minor tweaks of copyrighted commercial patches unless you have permission from the copyright owner. All submitted patches are subject to consideration for mutilation and comments by Sam Mims and Jeffrey Rhoads — our resident patch analysts. If you send in a patch, *please* include your phone number. Requests for particular patches are also very welcome.

Classifieds

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"I'll keep moving until those pesky FBI agents leave me alone!" Yes, Tom Shear has moved again, so if you want to receive a free catalog of his inexpensive 16-bit classic synth samples, send an SASE to: 726 Fourth Ave., Williamsport, PA 17701.

ESQ-1 ROM cartridges still available! Only a few left: $30 and less. **VFX, VFX-sd, SD-1 ROM cartridges:** $40 and less. Also, **EPS, EPS-16+, ASR-10 samples.** Call or write for info. **Cesium Sound,** 1442A Walnut St., #300, Berkeley, CA 94709. Phone: 510-548-6193, Fax: 510-540-1057.

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Please be sure to pass along how absolutely vital it is to have a subscription to the *Transoniq Hacker*. And how wonderful we are. And how you couldn't have survived without us. And how they should quick send us a check before they do anything else. And...

Transoniq-Net

HELP WITH QUESTIONS

All of the individuals listed below are *volunteers*! Please take that into consideration when calling. If you get a recording and leave a message, let 'em know if it's okay to call back collect (this will greatly increase your chances of getting a return call).

All Ensoniq Gear – Ensoniq Customer Service. 9:30 am to noon, 1:15 pm to 6:30 pm EST Monday to Friday. 610-647-3930.

All Ensoniq Gear – Electric Factory (Ensoniq's Australia distributor). Business hours – Victoria. (03) 480-5988.

SD-1 Questions – Philip Magnotta, 401-467-4357, 4 pm – 12:30 EST.

VFX Sound Programming Questions – Dara Jones, Compuserve: 71055,1113 or Internet: ddjones@netcom.com or call 214-361-0829.

SD-1, DP/4, ASR-10 Questions – John Cox, 609-888-5519, (NJ) 5pm – 8 pm EST weekdays. Any time weekends.

SQ-80 Questions – Robert Romano, 607-533-7878. Any ol' time.

Hard Drives & Drive Systems, Studios, & Computers – Rob Feiner, Cinetunes. 914-963-5818. 11am–3pm EST. Compuserve: 71024,1255.

EPS, EPS-16 PLUS, & ASR-10 Questions – Garth Hjelte. Rubber Chicken Software. Call anytime. If message, 24-hour callback. (305) 792-9231. Compuserve: 72203,2303.

ESQ-1 AND SQ-80 Questions – Tom McCaffrey. ESQUPA. 215-830- 0241, before 11 pm Eastern Time.

EPS/MIRAGE/ESQ/SQ-80 M.U.G. 24-Hour Hotline – 212-465-3430. Leave name, number, address. 24-hr Callback.

Sampling & Moving Samples – Jack Loesch, (908) 264-3512. Eastern Time (N.J.). Call after 6:00 pm.

MIDI Users – Eric Baragar, Canadian MIDI Users Group, (613) 392- 6296 during business hours, Eastern Time (Toronto, ONT) or call MIDILINE BBS at (613) 966-6823 24 hours.

SQ-1, KS-32, SD-1, SCSI & hard drive Questions – Pat Finnigan, 317-462-8446. 8:00 am to 10:00 pm EST.

ESQ-1, MIDI & Computers – Joe Slater, (404) 925-7929. EST.

The Interface

Letters for The Interface may be sent to any of the following addresses:
U.S. Mail - The Interface, Transoniq Hacker, 1402 SW Upland Dr., Portland, OR 97221
Electronic mail - GEnie Network: TRANSONIQ, Internet: interface@transoniq.com.
This is probably one of the most open forums in the music industry. Letter writers are asked to please keep the vitriol to a minimum. Readers are reminded to take everything with a grain of salt. Resident answer-man is Clark Salisbury (CS). Letter publication is subject to space considerations.

To: Hacker

In regard to Gerry Leone's letter last month – the question was "How can I get my **ASR** (using the VODER) to sing my name?" and the problem was that Gerry's name has the soft G in it. The answer is that it can be done (but I didn't say it was easy). The VODER is indeed programmable, so that you can add as many different new vocal formants to it as you like. The real problem lies in the fact that soft G (or J) is one of those difficult consonants that is fricative. The fricative means that there is a little burst of noise at the beginning. To do this on the VODER, you have to sample a short burst of noise, and assign it to the keyboard someplace handy. The noise should go through the VODER. On a J sound, the noise gets filtered by the "E" filter frame.

Bill Mauchly
WAVeBOY
Paoli, PA

Dear TH, CS, and Miguel Frasconi,

Mr. Frasconi asked in his letter in the October issue whether anybody sells **ASR** disks of unusual tunings. Clark correctly speculated that I have one available. I have offered it for quite a while now, originally for the EPS, but it works fine on my ASR.

I call it the EPS Xenharmonic Scales Disk, and it has several large wads of tunings on it: 12-toned 5- and 7-limit just intonation in several keys, harmonic and subharmonic series fragment tunings, Harry Partch's "Monophony," third-, quarter-, and sixth-comma meantone, various baroque harpsichord/organ well-temperaments (Werkmeister, Kirberger, etc.), several non-historical well-temperaments, equal-temperaments of 14, 15, 16, 17, 19, 22, 24, 31, 34, and 53 tones per octave, Carlos' alpha and beta, several other nonoctave tunings, and a handful of "demo" tunings. Perhaps a few others on there.

It comes with a thirty-some-odd-paged booklet on the tunings, explaining what's especially interesting about them, and the theoretical and historical meanings behind them.

I "sell" it pretty much at cost. $10. (I don't want the IRS to get the impression that I'm making any money at this!)

Oh yes, if you folks want to learn more about unusual tunings, I'm starting up the "Xenharmonic Alliance" as a memorial to recently departed Ivor Darreg. Thus far it's a computer database of people listing their interests and expertise, from which I send out a semiperiodic directory. If you're interested in, say, nonoctave tunings, you can turn to page 4 and there you see a list of people with interest and/or experience in that field. It's all free (wow, they just pay me too much!) provided that you profess that you have a more than merely casual interest in the field.

Anyway, if you're interested in either, my address is 13036 Staton Drive, Austin, Texas 78727, USA.

Your Detwelvulated Hacker –
Gary Morrison
Austin, Texas

[CS – Thanks so much for writing, Gary. I'm sure many of our readers will be interested in what you're doing.]

Dear Transoniq Hacker,

I always enjoy reading the letters in the Interface, and I've wished for a long time that I had a worthwhile application to contribute to the conversation. Today I discovered a fantastic way to use my **ASR-10**, which is torqued up to 16 meg. I've got SCSI and I use a Bernoulli 150 drive with the ASR.

Up in these parts, the weather has just started turning cold, and the furnace just got its first wake-up call. Everything was okay for a couple of days until late last night: As I was trying to wash the crusted-on pesto out of one of our pots, I noticed that I had the cold water off entirely and was still not getting my hands burnt. By this morning the heat in the house was gone altogether.

Things were looking pretty grim until I cranked up my trusty ASR-10. Boy, this baby cranks the BTUs, let me tell you. By the time I had the Bernoulli whirring, my dog was moving around again. I sat a pan of water on the ASR front panel and the house right now is downright toasty, and not at all dry! What a wonderful instrument!

Ensoniq truly delivers the "Technology that Performs!"

Artie Veebe
Gatzke, Minnesota

[TH – Whatever.]

Dear Hacker:

The usual thanks for a great publication. I have some questions for you and Ensoniq.

1) When will the **TS-12** music stand really be out? And how does it connect? Will I need a refit or does it just clamp on?

2) My dealer won't service my TS-12 because it is a floor model (something that they neglected to mention at purchase time). The Data Entry slider has a short which maxes it out frequently and unpredictably. Is there any way to bypass the slider completely? I would really like to try sequencing at something other then a 250 temp <g>.

3) This one is mostly for Ensoniq. What is the average turnaround for the General MIDI OS/3.0 upgrade? I play regularly for church and can't miss too many Sundays without causing a problem.

Thanks again for all the great info.

Brent Bowmaster
Sterling Heights, MI
internet: bowmaba@delphi.com

[CS – 2) Whether or not your TS-12 has been displayed as a "floor model" has no bearing on your warranty. A TS-12 that has

not previously been sold is technically a new instrument, regardless of whether or not it has been on a dealer's floor as a display model. Therefore, if your dealer is being honest with you, you are entitled to warranty service on your TS-12.

It could be, though, that your dealer is trying to pull a fast one; either the TS-12 you purchased is used, or the dealer is not actually authorized to carry Ensoniq gear. In any case, I'd recommend contacting Ensoniq Customer Service (610-647-3930). Explain to them what's going on, and have your serial number handy.]

[Ensoniq – 1) Sorry for the delay – we will start shipping the MS-1 music stand at the end of November. It simply sits in the pegs on the top of the TS-12, KT-76 or KT-88. Some of the earliest TS-12's have plastic plugs inserted into these holes – these units must be modified before you can use the music stand. Call Ensoniq Customer Service at (610) 647-3930 to arrange for this free modification.

2) We're perplexed by your comment about not being able to receive service. Floor model units that are sold are still covered under our warranty for 1 year from date of sale to you, the customer. We have your warranty information in our database and don't understand why you would be having any difficulty. We spoke to your dealer, who told us they would check with you directly on this matter. We have been trying to contact you ourselves, but as of this writing we have only spoken to your mother (a fine lady).

3) You can expect 2-3 weeks turnaround time including UPS Ground shipping both ways. If you want to pay for faster freight you can cut that time to approximately 1-2 weeks.]

Subject: New ASR-Effects

I always read about the **Waveboy-Effects** in the *Hacker*. Perhaps most people don't know about the **Prosoniq-Effects** from Germany. They have resonant filters, too, and should be much better than Waveboy. Prosoniq is even programming on a 7-Voice-Vocoder, a pitch-detector etc., which should be included in an additional ASR-O.S.!!!

Christian Ismer
swl0045@cip1.uni-hannover.de

[TH – Thanks for the news! Can you send any more info? We've never heard of them.]

[Ensoniq – We have heard their resonant filter, which is very nice, although not very different from WaveBoy's to our ears. We have heard nothing about nor received any other effects, but we welcome their efforts.]

Hi there...

I was wondering if you have any plans to make available the old *Hacker* issues or the Interface letters via FTP or a WWW page.

I have subscribed for a couple of years and would be keen to sift through the issues I've missed, and what better way to do it! Even if you charge subscribers for the privilege of FTP downloading...

Also, as a sales person for Ensoniq Products at a retail store in Australia, there would be a huge resource for problem solving and tips for everyone in making these older issues and articles available.

Cheers
Stuart Hosking
stuh@ozemail.com.au

[TH – Well, actually we're trying to think of a way to do this right now. In fact, a lot *of people are trying to figure out the same problem. How to charge for it and how to make sure that the first copy you sell isn't the last copy you sell ('cause it's all over the Internet the next day...). Anyway, things are certainly moving in that direction and I'm sure that it'll happen some day. (We're also trying to figure out how to generate an on-line Hacker edition, but before we can even begin to do that we also have to find out what kind of a market there is.)*

Meanwhile, the Interface letters are available on disk. In fact, these very words should be in the newly released 1994 edition by the time you read this.]

Hello Hacker:

I'm having the weirdest time trying to get my **EPS-16+** to send some sysex data to my Waldorf Microwave. Here's the scenario: I'm using O.S. 1.30, yes the SYSEX parameter is ON on the EPS, and yes the two instruments are on the same MIDI channel, and yes the EPS is set to transmit on BASE CHANNEL. I had previously saved all of the original Microwave patch info to an EPS SysEx file about one and a half years ago, thinking ahead so that I would always have the original machine patches. At the time, I KNEW I could transfer the SysEx data back to the Microwave, as I tried it to be sure everything was OK.

Recently, a friend gave me some new Microwave sounds on data card, which I copied into the internal memory, and then from the internal memory to an EPS SysEx file for storage. Today, when I tried to reload the original Microwave patches from my EPS SysEx file, NO GO. The extremely unusual thing is that I *can* successfully SysEx the newer EPS SysEx files that I recently stored back to the Microwave...What gives?

I thought that maybe I was using an older EPS O.S. at the time that I made the original SysEx backup file, and that had something to do with it, so I rebooted the machine with the original factory O.S. (I think it's 1.1). This did not help the problem. Oh, and I'm pretty sure that my sysex file is not corrupted or anything, as I have multiple copies of it, all of which do not work. What has happened?

Thanks for anyone who figures this out!
Dan Nigrin
dnigrin@welchlink.welch.jhu.edu

[CS – My guess is that the problem lies not with your EPS, but with the way you've configured your Microwave.

Most devices that are capable of sending and receiving SysEx data make provisions for having multiple devices of the same type on the same MIDI bus. The way this is handled, generally, is that each device can be assigned a unique ID number (known as Device ID). The idea is that if you have several Microwaves MIDI'd up, for example, you can send SysEx to any specific single unit (rather than all of them) by giving each unit its own unique device ID, then using the device IDs to "channel"

data to the target device of your choosing.

At any rate, it sounds to me like you saved your original data using one device ID number, and (for whatever reason), the device ID for your Microwave has since changed. This would explain why you can send and receive new data, but not receive old data.

I'm not familiar with the Microwave in particular, but I'm sure your manual can tell you how to change device IDs on your unit. You may have to try several different device IDs before finding the one originally used to save your old data. Once you figure it out, though, make it a practice to always use the same device ID when saving and loading SysEx; that way, you shouldn't have to go through this again.]

Subject: **EPS/ASR** Computer programs by Garth Hjelte in October 94 *Hacker*.

Thanks for your article about software for ASR but I thought I would mention something that I discovered. I tried unsuccessfully to try and download the file stEPS for Atari from the email address in the article. Consequently, I e-mailed the author and found out that this software is not for the Atari at all. Secondly, he informed me that the ftp site that I had accessed was a private site for those who had been given an invitation to download from. He was very gracious in his response but did not appreciate that the *Hacker* had given out his ftp address without his consent, not to mention that the information was incorrect.

Sincerely
Gregory
g_fine@PAVO.Concor

[TH – Oops. Thanks for letting us know. (One of the little glitches about being on the Net...) We sent an apology to the site and Terji was very understanding.]

[Garth – I had condensed what Terje had e-mailed me and put it into one section. stEPS is rather misnamed and it should be in the Mac section. Terje was in the process of moving his files out of oak.oakland.edu and keeping them on his own site. He did this unbeknownst to me. Anyway, thanks for letting us know.]

Dear Interfacing Hackers,

I've had my (original) **VFX** since September, 1988. The sounds, on-board effects, patch select buttons, programmability and price drew me irresistibly to the conclusion that this was the keyboard for me and six years later I still feel the same way.

In those six years I've had two problems that required actual repairs to the VFX, both based on software problems. Version 1.5 required a trip back to the factory two months after I bought the keyboard for the software plus hardware fix. Then, two years later, version 2.1 fried itself somehow. I was able to save my sounds to EEPROM, so none of my programming was lost. On both occasions Ensoniq did the repairs under warranty and on the second time installed version 2.3. Customer service apparently really means something to them.

I've encountered other problems which have not required repairs and I'd like to pass on my experience to save my fellow hackers some aggravation.

Last week I was editing some sounds and, being in a hurry, I didn't wait for a sustaining sound to die out before I tried the SAVE command. The new sound was saved to the appropriate location but when I tried to play it, no sound was produced. Obviously I had somehow confused the VFX's delicate nervous system. I turned the unit off, waited about a minute and turned it back on. During the CALIBRATING KEYBOARD – DO NOT TOUCH message, I got a KEYBOARD CALIBRATION ERROR – RECALIBRATE/IGNORE message. I tried IGNORE and still got no sound so I turned the VFX off, waited a minute, turned it back on and when I got the same error message I tried RECALIBRATE – still no sound.

I remembered something I had read about computers having to completely discharge their circuits (after an error) before they can successfully re-boot and figuring the VFX is basically a computer, I shut if off, went away, read a book and an hour later turned it on again, and as you've probably guessed by now, it worked fine – and has ever since. Ensoniq makes excellent products, but with the complexity and depth involved in the programming, it makes sense that when we owners occasionally ask too much of them, they temporarily check out. So watch out for that gremlin commonly known as "human error."

Thanks for a fine magazine and an excellent product line.
Joe Travo
Visalia, California

[CS – Thanks for the tip, Joe. It should be noted, though, that if you press the IGNORE button in response to the KEYBOARD CALIBRATION ERROR – RECALIBRATE/IGNORE message, the unit will power up with the keyboard disabled. This basically turns the unit into a large, rather inconvenient MIDI module. And while the sound-producing hardware and software might work okay when sent data via MIDI, playing the keyboard itself will produce no sound.]

[Ensoniq – Clark is right in his comments, but if you are getting Keyboard Calibration Error messages your VFX should be

looked at. We can fix the problem, and you wouldn't have to live with your work-around. Give Customer Service a call at (610) 647-3930 and we'll help.]

Greetings fellow hackers,

I have just recently become the proud owner of an Ensoniq **TS-12**. This is the first Ensoniq anything I have ever owned and I must say I am quite impressed. I only have one request.

Years ago I purchased an inexpensive program for my Roland D-550 called "D-50 Command," a wonderful and inexpensive editor/librarian that also performed patch randomization.

Now for those of you who do not know what this is, I'll tell ya. It is the coolest thing ever for coming up with incredible and imaginative sounds with a minimum of time, effort and the all too familiar migraines associated with sound programming.

How this works is very simple. You just select the sounds you wish to combine. Then press "create offspring" and TA-DAMN – suddenly you have 64 computer generated variations of your selected parent sounds. If you could only hear some of the unbelievably awesome sounds that came about for my D-550 by this quick and simple procedure, you would understand why I wish a program like this existed for the TS-12. Could you imagine hearing a software generated variation of the combined TS-12 sounds MIST, JURASSIC, METAL AIR, and ATMO-WAVES? I sure can and it makes me drool.

Now that I have brought up the idea I am officially challenging you software geniuses at Ensoniq, Steinberg Jones, Waveboy or simply whomever wants to make some money. If you can't pull off the miracle of having it simply work within the internal software of the TS-12 I will allow you to make a computer based program of this kind only if it is available on all computer formats. Not just for those wealthy Mac and IBM owners, but also for those of us who own those good old Atari 1040s.

Now if I am just an idiot and a program like this already exists then please tell me who I need to see to get one.

One final request/question. I bet expanding the ASR-10's Hard Disk recording capabilities from two tracks to at least four would not be all that difficult and would probably increase ASR-10 sales 100-fold.

Sincerely,
Sonicman (*Lord of Sound*)
3500 Northampton Lane
Modesto California

[TH – 100-fold, huh? That is a LOT of folds.]

[CS – Actually, the difficulty level of increasing the tracking abilities of the ASR falls somewhere between parting the Red Sea and predictably getting the same number of socks to come out of your clothes dryer as you put in. In other words, don't hold your breath. The limitation, as I understand it, is the hardware itself (a similar problem exists with Rush Limbaugh, but that's another story).]

[Ensoniq – "Expanding it from two tracks to four would not be all that difficult..." excuse me, but I have to go revive all those software engineers who just fainted in shock.

Believe us when we tell you that the ASR-10's microprocessor is not powerful enough to handle more tracks of audio while also keeping the sequencer and voices running and properly synchronized. If it were we would have made it four tracks in the first place.]

Dear Transoniq Hacker,

Like many before me, I'd like to start by saying *thanks!* for such a great magazine. I've had several questions floating around in my mind for a while and the Interface seems to be the best forum for getting answers. I have a **TS-10** and a **DP/4** which I love and use constantly. Currently, the main focus of my arranging is making music for square dancing. Yes, there is a small market for it, using the latest of pop and country music.

Now for my questions:

1. My previous keyboard was a VFXsd (may its soul rest in peace). It had an Alto Sax patch on it that had kind of a raw sound to it. None of the saxes on the TS-10 quite sound like that. I wonder if there is a way to program the TS to have that quality. One would probably have to compare the VFX version with the TS to understand what I mean. To coin a phrase, maybe this is a job for HACKERPATCH-MAN.

2. Keep the DP/4 apps coming in the *Hacker*. I would personally like to see more emphasis put on basic recording with real world applications. I don't have a clue about how to program guitar amps, chorus, compressors and reverb other than changing wet/dry mixtures. Everything that I do pick up is from toying around or reading the fine articles in the *Hacker* or *Electronic Musician.*

3. When I work on a track using the Event-List Editor on the TS, I get very predictable results. Nothing that I "KEEP" gets kept. Here is a common example. I've recorded a track and accidentally hit A-flat while aiming for G. Going through the

Maybe your question has already been answered —

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event list, I find that note, delete it, choose it keep it on the Play/Keep page. However, upon playback, there's that darned old A-flat again. What do you think? Everything else seems to work right whenever the Play/Keep page pops up.

4. Is the purpose of an 88-note keyboard controller to play the patches of something like the TS and yet retain the feel of a full-size keyboard? What else is it used for?

Thanks in advance for your time reading this. The *Hacker* is an excellent magazine and Ensoniq still puts out the best products on the market. Thumbs up to both.

Kevin Robinson
Lexington, Kentucky

[CS – 1) It seems like it shouldn't be too hard to re-create the sax patch from the VFX, considering the similarities between it and the TS-10/12. The ROM waves in the TS are different, though, so it may not be possible to get it exactly right. At any rate, I guess the best response I can make is "GO HACKERPATCHMAN, GO!!"

3) I'm afraid I don't have a clue. The scenario you describe works fine for me. I'd suggest contacting Ensoniq Customer Service (610-647-3930) directly, and describing the problem. They should be able to help you iron things out.

4) Aside from the feel-factor, 88-note keyboards are meant to provide the same range of notes as found on the piano. Without all 88 notes, one can find oneself running off the keyboard when playing music written for piano, which is no fun. And having the extra notes has the added benefit of allowing you to have a greater range for any sound you might want to use – particularly handy when you're splitting the keyboard among two or more sounds.

[Ensoniq – 1) You should also look to our sampled sound disks, the disk in SLT-4 collection and the original EPS In Box sounds use the same wavedata as was used in the VFX wave ROM.]

Interface,

The November TH mentions twice about extraneous noise coming from **EPS/ASRs** while banks are loading (ppg. 9 and 26). Come to think of it, this is a common occurrence in both the 16-Plus and ASR we have, and a persistent problem from a MIDI accordionist I know. I know you already answered the question, but is this more common than a one-time problem? Is it a hardware or software problem? What should we do – replace the mainboard? What if we are out of warranty?

Thanks!
Garth/RCS
ChickenEPS@aol.com

[CS – I'm afraid I can't make any real attempt at diagnosing your noise problems without more information. I will say that many noise problems are the result of improper or sloppy wiring – running AC, MIDI, SCSI, or other non-audio cables parallel and/or in close proximity to audio cables is a major cause of hums and buzzes. Improper grounding conditions can likewise lead to difficulty with noise.

My best suggestion, though, is that you contact Ensoniq Customer Service (610-647-3930) directly. They should be able to help you determine whether your keyboards are causing problems, or if some other factor might be involved.]

[Ensoniq – It's important to characterize what we (you) mean by noises here. For example, if the Bank calls up a different effect, the effects processor has no choice but to shut down and re-configure. Under some circumstances this can produce noises if sounds are being played, or delay regeneration times are changed while delays are still producing repeats. Changing sounds while the effects are set to Instrument can also produce this effect. The best method is not to sound notes while changing sounds or Banks.

If this is not the right answer than we need more details from you about the noise you experience.]

Dear Transoniq Hacker,

I have a **TS-10**, which I have come to like a lot. However, I did have to bring it in for repair a couple of times. My authorized repairman stated that he has seen quite a few TS-10s. Now I am considering a trade-up for the TS-12. What is the repair record on them?

I find the TS-10 feel for playing piano parts a bit problematic, especially playing with a piano module. Is there any way to improve the action for piano? Will Ensoniq upgrade or improve this on the TS-10?

A slightly crisper piano sound, with more realistic upper mid-notes that don't fade so quickly would be welcome. Any idea on how/where to get this on the TS series?

Thanks a lot!

Sincerely,
Michael Kurjan
Branford, CT

[CS – In my experience, TS-10s and 12s have been pretty reliable (mine's performed like a champ, and friends of mine who own either instrument do not seem to be having problems with them), but I'm afraid I can't provide any empirical data; perhaps Ensoniq can provide some more scientific data.

As far as making changes to the action of your TS-10, there's no way I know of to change the mechanics of your keyboard. You may be aware, though, that there are a number of software-controlled velocity response curves to choose from, which are accessed from the TS-10 SYSTEM menu. If you haven't already, I'd suggest giving a few of these a try to ensure that you are using the best one for your particular needs.]

[Ensoniq – If you are looking for a better feel for playing piano parts it seems to us that you may want to try a TS-12. After all, a weighted action is what piano feel is all about! In any event you should try the different velocity curves found on the System Page to find a curve that best matches the response of your module.

As far as another piano sound goes, don't forget that you can load sampled sounds into your TS-10. We offer a variety of new piano sounds (try AS-7 Baldwin Pianos), and look to the Hacker *for many fine third-party collections.]*

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